

TRANSLATED PROTEIN - NUCLEOTIDE 65 TO 598

1 AATTCGGTACGAGGCTGGGGTTCAGGCGGGCAGCAGCTGCAGGCT
 46 GACCTTGCAGCTTGGCGGAATGGACTGGCCTCACAACCTGCTGTT
 MetAspTrpProHisAsnLeuLeuPh
 91 TCTTCTTACCATTTCCATCTTCCTGGGGCTGGGCAGCCAGGAGCC
 eLeuLeuThrIleSerIlePheLeuGlyLeuGlySerGlnGluPr
 136 CCAAAAGCAAGAGGAAGGGGCAAGGGCGGCCTGGGCCCTGGCCTG
 oGlnLysGlnGluGlyAlaArgAlaAlaTrpAlaLeuAlaTr
 181 GCCTCACCAGGTGCCACTGGACCTGGTGTACGGATGAAACCGTA
 pProHisGlnValProLeuAspLeuValSerArgMetLysProTy
 226 TGCCCGCATGGAGGAGTATGAGAGGAACATCGAGGAGATGGTGGC
 rAlaArgMetGluGluTyrGluArgAsnIleGluGluMetValAl
 271 CCAGCTGAGGAACAGCTCAGAGCTGGCCCAGAGAAAGTGTGAGGT
 aGlnLeuArgAsnSerSerGluLeuAlaGlnArgLysCysGluVa
 316 CAACTTGCAGCTGTGGATGTCCAACAAGAGGAGCCTGTCTCCCTG
 lAsnLeuGlnLeuTrpMetSerAsnLysArgSerLeuSerProTr
 361 GGGCTACAGCATCAACCACGACCCAGCCGTATCCCCGTGGACCT
 pGlyTyrSerIleAsnHisAspProSerArgIleProValAspLe
 406 GCCGGAGGCACGGTGCCTGTGTCTGGGCTGTGTGAACCCCTTCAC
 uProGluAlaArgCysLeuCysLeuGlyCysValAsnProPheTh
 451 CATGCAGGAGGACCGCAGCATGGTGAGCGTGCCGGTGTTCAGCCA
 rMetGlnGluAspArgSerMetValSerValProValPheSerGl
 496 GGTTCCTGTGCCCGCCGCTCTGCCCGCCACCGCCCCGCACAGG
 nValProValArgArgArgLeuCysProProProProArgThrGl
 541 GCCTTGCCGCCAGCGCGCAGTCATGGAGACCATCGCTGTGGGCTG
 yProCysArgGlnArgAlaValMetGluThrIleAlaValGlyCy
 586 CACCTGCATCTTCTGAATCACCTGGCCCAGAAGCCAGGCCAGCAG
 sThrCysIlePhe
 631 CCCGAGACCATCTCCTTGACCTTTGTGCCAAGAAAGGCCTATG
 676 AAAAGTAAACACTGACTTTTGAAGCAAAAAACCCAGGAAGCT
 721 TCGGCTGGGTTCAGACACATGGAAAACAGACTTCCTGTGCCAGC
 766 GCATGCTGATCCCTTCAGCAGCCGCTTCTCCACCCTTGGGGCTGC
 811 TCTCCAGCACCTGGCAGTGTCCAGAGCGGATAGGGGCGCCGTGT
 856 TGGTGAATGAGTGCACAGACGCCTCTAGGGGGAGCCCAAGATCTG
 901 CCTCCTGCCTCCCTCTATTATGCCTTCATAGGTGGGTGAGAACA
 946 AGAATTCTTATCAACCTCCCGGGTCCCCACTGCCAATCACCCA
 991 CCTCCATTCTACCCTCTACAGCTGCCCCCTATCCCCCAAAGTCCT
 1036 GAAATTTTGCTTGGGTACCTGCTCCAGGAGGCAGAGTTCCTCATG
 1081 AAGGGTATTAAACGTCTACTACACTGC

Fig. 1

TRANSLATED PROTEIN - NUCLEOTIDE 92 TO 1123

1 CAAGCTTGAGAGCAACACAATCTATCAGGAAAGAAAGAAAGAAAA
46 AAACCGAACCTGACAAAAAGAAGAAAAAGAAGAAAAAAAT

91 CATGAAAACCATCCAGCCAAAAATGCACAATTCTATCTCTTGGGC
MetLysThrIleGlnProLysMetHisAsnSerIleSerTrpAl

136 AATCTTCACGGGGCTGGCTGCTCTGTGTCTCTTCCAAGGAGTGCC
aIlePheThrGlyLeuAlaAlaLeuCysLeuPheGlnGlyValPr

181 CGTGCGCAGCGGAGATGCCACCTTCCCCAAAGCTATGGACAACGT
oValArgSerGlyAspAlaThrPheProLysAlaMetAspAsnVa

226 GACGGTCCGGCAGGGGGAGAGCGCCACCCTCAGGTGCACATATTGA
lThrValArgGlnGlyGluSerAlaThrLeuArgCysThrIleAs

271 CAACCGGGTCACCCGGGTGGCCTGGCTAAACCGCAGCACCATCCT
pAsnArgValThrArgvalAlaTrpLeuAsnArgSerThrIleLe

316 CTATGCTGGGAATGACAAGTGGTGCCTGGATCCTCGCGTGGTCCT
uTyrAlaGlyAsnAspLysTrpCysLeuAspProArgValValLe

361 TCTGAGCAACACCCAAACGCAGTACAGCATCGAGATCCAGAACGT
uLeuSerAsnThrGlnThrGlnTyrSerIleGluIleGlnAsnVa

406 GGATGTGTATGACGAGGGCCCTTACACCTGCTCGGTGCAGACAGA
lAspValTyrAspGluGlyProTyrThrCysSerValGlnThrAs

451 CAACCACCCAAAGACCTCTAGGGTCCACCTCATTGTGCAAGTATC
pAsnHisProLysThrSerArgValHisLeuIleValGlnValSe

496 TCCCAAAATTGTAGAGATTTCTTCAGATATCTCCATTAATGAAGG
rProLysIleValGluIleSerSerAspIleSerIleAsnGluGl

541 GAACAATATTAGCCTCACCTGCATAGCAACTGGTAGACCAGAGCC
yAsnAsnIleSerLeuThrCysIleAlaThrGlyArgProGluPr

586 TACGGTTACTTGGAGACACATCTCTCCCAAAGCGGTTGGCTTTGT
oThrValThrTrpArgHisIleSerProLysAlaValGlyPheVa

631 GAGTGAAGACGAATACTTGGAAATTCAGGGCATCACCCGGGAGCA
lSerGluAspGluTyrLeuGluIleGlnGlyIleThrArgGluGl

676 GTCAGGGGACTACGAGTGCAGTGCCTCCAATGACGTGGCCGCGCC
nSerGlyAspTyrGluCysSerAlaSerAsnAspValAlaAlaPr

Fig. 2

721 CGTGGTACGGAGAGTAAAGGTCACCGTGAACCTATCCACCATACAT
 oValValArgArgValLysValThrValAsnTyrProProTyrI1
 766 TTCAGAAGCCAAGGGTACAGGTGTCCCGTGGGACAAAAGGGGAC
 eSerGluAlaLysGlyThrGlyValProValGlyGlnLysGlyTh
 811 ACTGCAGTGTGAAGCCTCAGCAGTCCCCTCAGCAGAATTCCAGTG
 rLeuGlnCysGluAlaSerAlaValProSerAlaGluPheGlnTr
 856 GTACAAGGATGACAAAAGACTGATTGAAGGAAAGAAAGGGGTGAA
 pTyrLysAspAspLysArgLeuIleGluGlyLysLysGlyValLy
 901 AGTGGAAAACAGACCTTTCTCTCAAACTCATCTTCTTCAATGT
 sValGluAsnArgProPheLeuSerLysLeuIlePhePheAsnVa
 946 CTCTGAACATGACTATGGGAACCTACACTTGGTGGCCTCCAACAA
 lSerGluHisAspTyrGlyAsnTyrThrCysValAlaSerAsnLy
 991 GCTGGGCCACACCAATGCCAGCATCATGCTATTTGGTCCAGGCGC
 sLeuGlyHisThrAsnAlaSerIleMetLeuPheGlyProGlyAl
 1036 CGTCAGCGAGGTGAGCAACGGCACGTCGAGGAGGGCAGGCTGCGT
 aValSerGluValSerAsnGlyThrSerArgArgAlaGlyCysVa
 1081 CTGGCTGCCGCCTCTTCTGGTCTTGACCTGCTTCTCAAATTTTG
 lTrpLeuProProLeuLeuValLeuHisLeuLeuLeuLysPhe
 1126 ATGTGAGTGCCACTTCCCCACCCGGGAAAGGCTGCCGCCACCACC
 1171 ACCACCAACACAACAGCAATGGCAACACCGACAGCAACCAATCAG
 1216 ATATATACAAATGAAATTAGAAGAAACACAGCCTCATGGGACAGA
 1261 AATTTGAGGGAGGGGAACAAAGAATACTTTGGGGGGAAAAGAGTT
 1306 TTAAAAAAGAAATTGAAAATTGCCTTGCAGATATTTAGGTACAAT
 1351 GGAGTTTTCTTTTCCCAAACGGGAAGAACACAGCACACCCCGGCTT
 1396 GGACCCACTGCAAGCTGCATCGTGCAACCTCTTTGGTGCCAGTGT
 1441 GGGCAAGGGCTCAGCCTCTCTGCCCACAGAGTGCCCCCACGTGGA
 1486 ACATTCTGGAGCTGGCCATCCCAAATTCATCAGTCCATAGAGAC
 1531 GAACAGAATGAGACCTTCCGGCCCAAGCGTGGCGCTGCGGGCACT
 1576 TTGGTAGACTGTGCCACCACGGCGTGTG

Fig. 2 (continued)

TRANSLATED PROTEIN - FRAME: 3 - NUCLEOTIDE 501 TO 1532

1 GCCAGGGAATGCCAGGGGAAAGGGATTTTCTGATACTCAGAAGA
 46 CTCAGAGACTGTCAGTTTAAAAAATGAAAGTAATATAGAAGGGGC
 91 AAAGTGGCATTATCATTCTATCTCTCCAGGCTCCTGTCTCTTTA
 136 ATCAGCTAGCCTGATTTGCCCAGTAAATGATTCCTGAGAGTGTGT
 181 GTGCGTGTGTGTGTGTGTGTGTGCCCCGCGCGTGTGTGTAGCT
 226 CTGTCAATCCTTGGATTAGAACCAATGATTGCAGCTTGTAAGAGG
 271 GCTGTCCAGGGCCAGATTGTACAATGTGTCTCAGTGCCAGAGTAT
 316 GAGTGGAGATAATTACGGAGAAGTCATACTCTCTCACACCCCTCGG
 361 CTTTCTTGTTGTGTCTTCAGCAAAACAGTGGATTAAATCTCCT
 406 TGCACAAGCTTGAGAGCAACACAATCTATCAGGAAAGAAAGAAAG
 451 AAAAAAACCGAACCTGACAAAAAAGAAGAAAAAGAAGAAAAA
 496 AAATCATGAAAACCATCCAGCCAAAAATGCACAATTCTATCTCTT
 MetLysThrIleGlnProLysMetHisAsnSerIleSerT
 541 GGGCAATCTTCACGGGGCTGGCTGCTCTGTGTCTCTTCCAAGGAG
 rpAlaIlePheThrGlyLeuAlaAlaLeuCysLeuPheGlnGlyV
 586 TGCCCGTGCGCAGCGGAGATGCCACCTTCCCCAAAGCTATGGACA
 alProValArgSerGlyAspAlaThrPheProLysAlaMetAspA
 631 ACGTGACGGTCCGGCAGGGGGAGAGCGCCACCCTCAGGTGCACTA
 snValThrValArgGlnGlyGluSerAlaThrLeuArgCysThrI
 676 TTGACAACCGGGTCACCCGGGTGGCCTGGCTAAACCGCAGCACCA
 leAspAsnArgvalThrArgvalAlaTrpLeuAsnArgSerThrI
 721 TCCTCTATGCTGGGAATGACAAGTGGTGCCTGGATCCTCGCGTGG
 leLeuTyrAlaGlyAsnAspLysTrpCysLeuAspProArgValV
 766 TCCTTCTGAGCAACACCCAAACGCAGTACAGCATCGAGATCCAGA
 alLeuLeuSerAsnThrGlnThrGlnTyrSerIleGluIleGlnA
 811 ACGTGGATGTGTATGACGAGGGCCCTTACACCTGCTCGGTGCAGA
 snValAspValTyrAspGluGlyProTyrThrCysSerValGlnT
 856 CAGACAACCACCCAAAGACCTCTAGGGTCCACCTCATTGTGCAAG
 hrAspAsnHisProLysThrS rArgValHisL uIl ValGlnV

Fig. 3

901 TATCTCCCAAAATTGTAGAGATTTCTTCAGATATCTCCATTAATG
 alSerProLysIleValGluIleSerSerAspIleSerIleAsnG
 946 AAGGGAACAATATTAGCCTCACCTGCATAGCAACTGGTAGACCAG
 luGlyAsnAsnIleSerLeuThrCysIleAlaThrGlyArgProG
 991 AGCCTACGGTTACTTGGAGACACATCTCTCCCAAAGCGGTTGGCT
 luProThrValThrTrpArgHisIleSerProLysAlaValGlyP
 1036 TTGTGAGTGAAGACGAATACTTGGAAATTCAGGGCATCACCCGGG
 heValSerGluAspGluTyrLeuGluIleGlnGlyIleThrArgG
 1081 AGCAGTCAGGGGACTACGAGTGCAGTGCCTCCAATGACGTGGCCG
 luGlnSerGlyAspTyrGluCysSerAlaSerAsnAspValAlaA
 1126 CGCCCGTGGTACGGAGAGTAAAGGTCACCGTGAACATATCCACCAT
 laProValValArgArgvalLysValThrValAsnTyrProProT
 1171 ACATTTTCAGAAGCCAAGGGTACAGGTGTCCCGTGGGACAAAAGG
 yrIleSerGluAlaLysGlyThrGlyValProValGlyGlnLysG
 1216 GGACACTGCAGTGTGAAGCCTCAGCAGTCCCCTCAGCAGAAATCC
 lyThrLeuGlnCysGluAlaSerAlaValProSerAlaGluPheG
 1261 AGTGGTACAAGGATGACAAAAGACTGATTGAAGGAAAGAAAGGGG
 lnTrpTyrLysAspAspLysArgLeuIleGluGlyLysLysGlyV
 1306 TGAAAGTGGAAAACAGACCTTTCCTCTCAAACTCATCTTCTTCA
 alLysValGluAsnArgProPheLeuSerLysLeuIlePhePheA
 1351 ATGTCTCTGAACATGACTATGGGAACACACTTTCGTGGCCTCCA
 snValSerGluHisAspTyrGlyAsnTyrThrCysValAlaSerA
 1396 ACAAGCTGGGCCACACCAATGCCAGCATCATGCTATTTGGTCCAG
 snLysLeuGlyHisThrAsnAlaSerIleMetLeuPheGlyProG
 1441 GCGCCGTCAGCGAGGTGAGCAACGGCACGTCGAGGAGGGCAGGCT
 lyAlaValSerGluValSerAsnGlyThrSerArgArgAlaGlyC
 1486 GCGTCTGGCTGCCGCTCTTCTGGTCTTGACCTGCTTCTCAAAT
 ysValTrpLeuProProLeuLeuValLeuHisLeuLeuLeuLysP
 1531 TTTGATGTGAGTGCCACTTCCCCACCCGGGAAAGGCTGCCGCCAC
 he

Fig. 3 (continued)

1576 CACCACCACCAACACAACAGCAATGGCAACACCGACAGCAACCAA
1621 TCAGATATATACAAATGAAATTAGAAGAAACACAGCCTCATGGGA
1666 CAGAAATTTGAGGGAGGGGAACAAAGAATACTTTGGGGGGAAAAG
1711 AGTTTTAAAAAAGAAATTGAAAATTGCCTTGCAGATATTTAGGTA
1756 CAATGGAGTTTTCTTTTCCCAAACGGGAAGAACACAGCACACCCG
1801 GCTTGGACCCACTGCAAGCTGCATCGTGCAACCTCTTTGGTGCCA
1846 GTGTGGGCAAGGGCTCAGCCTCTCTGCCCACAGAGTGCCCCACG
1891 TGGAACATTCTGGAGCTGGCCATCCCAAATTCAATCAGTCCATAG
1936 AGACGAACAGAATGAGACCTTCCGGCCCAAGCGTGGCGCTGCGGG
1981 CACTTTGGTAGACTGTGCCACCACGGCGTGTG

Fig. 3 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 529 TO 1026

1 GCTCTTCCTGAAGGAAGATCCAGTGGCATATCTCCATGGCTGCCA
 46 GACAGAGTAGAGAAATGGAAC TTATCGGTGTCTCTTCAGAAGTTT
 91 TGTTACAAATATCCAGAAATATTTCTATAATCTAATCAGCAGATT
 136 ATGAATATATGCATTAGACTTTAGTTTTGGTGCAATCACATGAAT
 181 TCCATTTTGTGGAGTAAGAGGTGACTGGGGTATAGGGTACAACCC
 226 ATAGCCATCCATGTTTCATCTTTGTTTTGAATATAATTGGCTAGAA
 271 GATATACATATATCTATGTAAC TTCTCTAGCATCCTCCAGTATG
 316 GAGGCTGCATTAAGACTGCATGAAGGAGAGGGAGAGAAGGGAGAA
 361 ACAGAGCAGCTGGACAAGAGGACAGGTATAGGGAATAAGGGAGAA
 406 GCCAGTAAGGCAGGAAAGACCC TCCGTGACAAAGGGGCAGGGAAC
 451 AGAACTCAAACATTTAATGGCAGGTAACCCAGGTTAGAATGGTAA

 496 ATTGAAAGGTGAATATAAAGGGAGAATGGTGAAATGAATTTTCTG
 MetAsnSheLeu

 541 AAATTAATTGCTGTGTTTATAGTTTTTAGCCATGCATCGGAATCA
 LysLeuIleAlaValPheIleValPheSerHisAlaSerGluSer

 586 CCTCAGGACTCCACTCCCAATCAATTATATATCTGGGGGAGGACC
 ProGlnAspSerThrProAsnGlnLeuTyrIleTrpGlyArgThr

 631 AAGGCGTTGGTATTTTTTCAGAAGCTCCACTGGTGATTCTGACAGC
 LysAlaLeuValPhePheArgSerSerThrGlyAspSerAspSer

 676 ACAGCTAGGATTAAGAACTGATCAATGGGAACGGCATGCCTGTT
 ThrAlaArgIleLysLysLeuIleAsnGlyAsnGlyMetProVal

 721 GCAGAGGAGCTTCCCTGGGAAATGTCACACACAGAACATCAATCT
 AlaGluGluLeuProTrpGluMetSerHisThrGluHisGlnSer

 766 TCCTTCCCCACTCCTGAGATCCCTCATTCTTTGGCACCAGGAACA
 SerPheProThrProGluIleProHisSerLeuAlaProGlyThr

 811 GTTGCAATTAGTAAACCCTGGTTCCCTGCTGTCTCACAAATCGCA
 ValAlaIleSerLysProTrpPheProAlaValSerGlnIleAla

 856 AGAGTCCAACGTGTGGATATAAACTTTTGTTTCATGGGAGGATCTT
 ArgValGlnArgValAspIleAsnPheCysSerTrpGluAspLeu

 901 TCTCCCAGTGGAAAAGCAACTGGGAAAAGCAGGACACACTGCACA
 SerProSerGlyLysAlaThrGlyLysSerArgThrHisCysThr

 946 GTGACTGCAGTTTCATCCAATGCCACCACCCATGCAGGCATAAAT
 ValThrAlaValSerSerAsnAlaThrThrHisAlaGlyIleAsn

 991 AATGAACATGGATGGGGGAGTCTGGAGCTGCTGAATTGAGGAAGA
 AsnGluHisGlyTrpGlySerLeuGluLeuLeuAsn

 1036 AAGAACACAGAAATTAAAATTCTCACAAAGGTTACCATTAAGCTA
 1081 GAGGAAGACCACACCCTGTGTGTCCACAAAGATACAGAGCCAGG
 1126 CCGGGTTCAGCCATGCTGGTTCATCTGCTCTATATAATACAATTAT
 1171 TTAGAGATGGTGGGTAGAGAACA ACTACAGAAAAAAAAAAAAAAAAA
 1216 AAAAAAAAAAAAAA

Fig. 4

TRANSLATED PROTEIN - NUCLEOTIDE 410 TO 889

1 ACGCGTCACATAAAGGAAAGATACGTTTTAATCATCTTTACAAGT
 46 GCGTCCTTGTACCTTTTCGGGATAACCTGTACTGATTTCTCTGCAG
 91 GACCTTTTCAAAGAATCCTCTTCAAGAGAGAAACAAATTTTAGGC
 136 TGACGACTTCACGGAGAGGCAGGTTCTGCTGTTGCCAATGAACGA
 181 GAACTTTTCTACTAGGCTGGCGGCATGCAGAGCCCACGTCTGTCAG
 226 CTGCCACCTTCGTAAAGCACACGTTTACATGCATGAGCTCGAGT
 271 GGCTAGAACTTCAAACTGTGCTCAGGTTTTGTTTTGGAAGTTA
 316 TAAAAAAGTTGCTCACAAACAATAGTTATTGCCTTTTATATCTTT
 361 TATGTTAGTCTACTAGTCAGCATTCTGCCCAAATGGAAAGCCAC

 406 TCCCATGGGAAGGGAGGGGGTAGCAGCTGGGAGTCTGCTCTTCCA
 MetGlyArgGluGlyValAlaAlaGlySerLeuLeuPheG1

 451 GCTGGGGGGCCCTCCCACCCCATGGGGAGGAAAGACGTCAAGCTC
 nLeuGlyAlaLeuProProProTrpGlyGlyLysThrSerSerSe

 496 CAGCCACTGGCCCCGGTGGGTCCCAAAGCCCCACCCCTCATGCTC
 rSerHisTrpProArgTrpValProLysProHisProSerCysSe

 541 TCCTCTGGTCACCTCTATTTACGCTCACATGCCCCCTTCTGTCTT
 rProLeuValThrSerIleTyrAlaHisMetProLeuProValLe

 586 TCACCTGCACGTCACCAGCAGGTCCCGCCAACCCCAAATCTATCT
 uHisLeuHisValThrSerArgSerArgGlnProGlnIleTyrLe

 631 GGTGAAAACCTGGAGAACAAGAGCGGAGTCTAAGAGAGATGTAAA
 uValLysThrTrpArgThrArgAlaGluSerLysArgAspValAs

 676 TGAAAACACAGATCAACAGACACACCAGAAGGGAAGCGTTGTTTC
 nGluAsnThrAspGlnGlnThrHisGlnLysGlySerValValSe

 721 CGCGGGGAAAGGAGATGGAAAGGGGAAGAGAAGTGAAGAATTCTG
 rAlaGlyLysGlyAspGlyLysGlyLysArgSerGluGluPheCy

 766 CGCCCGAAGCTCGGGTTGGTGTGTGCTCAACTGCTTTACTCATTT
 sAlaArgSerSerGlyTrpCysLeuLeuAsnCysPheThrHisPh

 811 TAACCCTTTACCTATCCTGGGAGAAACCCAGGCTTGTCACCTTT
 eAsnProPheThrTyrProGlyArgAsnProGlyLeuSerProPh

 856 TCATGTTGGGTTGTTTGTATTATTGGCCTCTTAAGTGAGAATTGAT
 eHisValGlyLeuPheValTyrTrpProLeuLys

 901 CCGTGAAGGGAAACAGACAGGAGGAGGTCAGATTGCGAATACCTG
 946 GGGCTTCCTAGGGTCCAGTGCGGCAGTTACCGCACCTGCCCTTCAC
 991 CCGTGAACCTTTAGCCAGCTGAACAACCACCAAAGCGCCCTGCAG

Fig. 5

1036 AGACAAGTCATCCAGCCCTCTGGCATGTCCCTGGTAGCCCGGGCA
1081 CCAGCCGCTGCGGCTTGTGAGGGGCACCATGCTCCACCCACGGG
1126 GACCTTTCACAGTTGGAAAAAGAAGAGGAAAACTAATTCCCTTCG
1171 GTAACAGTTTATTTTCATTTTTGGGAAAGGCAAAACCACTACCTG
1216 GAACTCGGTGCCCTCCGTGGTTAACTTTCCTATTTTGCTTGTGATT
1261 TAAAGGCTGTTCTGGGTCAGGGGGGAAAAGGTGTCTCCTTCGGTA
1306 GGGAATATATAACGTGGTGATAACCTGTCACTAGGCAGAAGCATC
1351 CACTCTGCAGGGACAGTGGCCCCCTCAGGAAAGCCCGCCGCTCCTG
1396 GCCAAGGCCTCTCTGCAGACTCCACGGGGGCTCACCCCTCTGCCGT
1441 CAGGCGACTCTGAAATTCGACATTTCTCCCTTAAAGTCTCAACA
1486 GACACAAGAGAAGTTTCCATCAAGCAAGCACTGACATATTTATAT
1531 TAAAAAATAGTGCAAAATCTCAACATTTATATAAATAACTCTAAA
1576 CCCCTGCTTTGTAATTTTTTTCTTTACAAGGTAATACACACTTTC
1621 TGACTTGGCACTCAAAAATTGCCATTTTTTTCTCCTCTTAGTTCA
1666 GAAAACAACTTTTTTTTTTAATAGGCCTCTTCTAATACAAAAATA
1711 CTCCTGCCCTCGCACATACAGTTTCTCTTATCTTATATATATTTA
1756 TATATATAATATTGCAGATCTTTAAACAAAGGTTTTGTGCAAATA
1801 TGTCTTTAAAGTTAAGTGAAATTATCATAAACAAAAGAAAATAAG
1846 CATTCACGCACGCAGCTCAACTAGAAACAAGAAAGACTACTGTAG
1891 AAATTTTTTTCTTTTGCCTTCAAGAC

Fig. 5 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 410 TO 892

1 ACGCGTCACATAAAGGAAAGATACGTTTTAATCATCTTTACAAGT
 46 GCGTCCTTGTACCTTTCGGGATAACCTGTACTGATTTCTCTGCAG
 91 GACCTTTTCAAAGAATCCTCTTCAAGAGAGAAACAAATTTTAGGC
 136 TGACGACTTCACGGAGAGGCAGGTTCTGCTGTTGCCAATGAACGA
 181 GAACTTTCTACTAGGCTGGCGGCATGCAGAGCCCACGTCTGTCAG
 226 CTGCCACCTTCGTAAAGCACACGTTTCACATGCATGAGCTCGAGT
 271 GGCTAGAACTTCAAACTGTGCTCAGGTTTTTGTGTTTGAAGTTA
 316 TAAAAAAGTTGCTCACAACAATAGTTATTGCCTTTTATATCTTT
 361 TATGTTAGTCTACTAGTCAGCATTCTGCCCAAATGGAAAGCCAC

 406 TCCCATGGGAAGGGAGGGGTAGCAGCTGGGAGTCTGCTCTTCCA
 MetGlyArgGluGlyValAlaAlaGlySerLeuLeuPheG1

 451 GCTGGGGGCCCTCCCACCCCATGGGGAGGAAAGACGTCAAGCTC
 nLeuGlyAlaLeuProProProTrpGlyGlyLysThrSerSerSe

 496 CAGCCACTGGCCCCGGTGGGTCCCAAAGCCCCACCCCTCATGCTC
 rSerHisTrpProArgTrpValProLysProHisProSerCysSe

 541 TCCTCTGGTCACCTCTATTTACGCTCACATGCCCTTCCTGTCTC
 rProLeuValThrSerIleTyrAlaHisMetProLeuProValLe

 586 TCACCTGCACGTCACCAGCAGGTCCCGCCAACCCCAAATCTATCT
 uHisLeuHisvalThrSerArgSerArgGlnProGlnIleTyrLe

 631 GGTGAAAACCTGGAGAACAAGAGCGGAGTCTAAGAGAGATGTAAA
 uValLysThrTrpArgThrArgAlaGluSerLysArgAspValAs

 676 TGAAAACACAGATCAACAGACACACCAGAAGGGAAGCGTTGTTTC
 nGluAsnThrAspGlnGlnThrHisGlnLysGlySerValValSe

 721 CGCGGGGAAAGGAGATGGAAAGGGGAAGAGAAGTGAAGAATTCTG
 rAlaGlyLysGlyAspGlyLysGlyLysArgSerGluGluPheCy

 766 CGCCCGAAGCTCGGGTTGGTGTGTTGCTCAACTGCTTTACTCATTT
 sAlaArgSerSerGlyTrpCysLeuLeuAsnCysPheThrHisPh

 811 TAACCCTTTCACCTATCTTGGGAGAAACCCAGGCTTGTCACCTTT
 eAsnProPheThrTyrProGlyArgAsnProGlyLeuSerProPh

 856 TCATGTTGGGTGTTTATTGGCCTCTTAAGTGAGAATTGATCCGT
 eHisValGlyLeuPheIleGlyLeuLeuSerGluAsn

 901 GAAGGGAAACAGACAGGAGGAGGTCAGATTGCGAATACCTGGGGC
 946 TTCCTAGGGTCCAGTGCGGCAGTTACCGCACCTGCCCTTACCAGGT
 991 GAACCTTTAGCCAGCTGAACAACCACCAAAGCGCCCTGCAGAGAC
 1036 AAGTCATCGAGCCCTCTGGCATGTCCCTGGTAGCCCGGGCACCAG
 1081 CCGCTGCGGCTTGAGGGGCACCATGCTCCACCCACGGGGACC
 1126 TTCACAGTTGGAAAAAAGAAAGAGGAAAACTAATTCCTTCGGTAA
 1171 CAGTTTATTTTCATTTTGGGAAAGGCAAACCACTACCTGGAAC
 1216 TCGGTGCCTGNGANNTCTTANNTNCTNNTNAGNCNNATNNGNNA
 1261 NNNNTNNNNNNANNTTNA

Fig. 6

TRANSLATED PROTEIN - NUCLEOTIDE 199 TO 1146

1 TAGAATTCAGCGGCCGCTTAATTCTAGAACGAATGCCAGTGCCTG
46 GAGGCATGCAGGCCAGCTACGTGCCTGTGTGCGGCTCTGATGGG
91 AGGTTTTATGAAAACCACTGTAAGCTCCACCGTGCTGCTGCCTC
136 CTGGGAAAGAGGATCACCGTCATCCACAGCAAGGACTGTTTCCTC

181 AAAGGTGACACGTGCACCATGGCCGGCTACGCCCCGCTTGAAGAAT
MetAlaGlyTyrAlaArgLeuLysAsn

226 GTCCTTCTGGCACTCCAGACCCGTCTGCAGCCACTCCAAGAAGGA
ValLeuLeuAlaLeuGlnThrArgLeuGlnProLeuGlnGluGly

271 GACAGCAGACAAGACCCTGCCTCCCAGAAGCGCCTCCTGGTGGAA
AspSerArgGlnAspProAlaSerGlnLysArgLeuLeuValGlu

316 TCTCTGTTTCAGGGACTTAGATGCAGATGGCAATGGCCACCTCAGC
SerLeuPheArgAspLeuAspAlaAspGlyAsnGlyHisLeuSer

361 AGCTCCGAAGTGGCTCAGCATGTGCTGAAGAAGCAGGACCTGGAT
SerSerGluLeuAlaGlnHisValLeuLysLysGlnAspLeuAsp

406 GAAGACTTACTTGGTTGCTCACCAGGTGACCTCCTCCGATTGAC
GluAspLeuLeuGlyCysSerProGlyAspLeuLeuArgPheAsp

451 GATTACAACAGTGACAGCTCCCTGACCCTCCGCGAGTTCTACATG
AspTyrAsnSerAspSerSerLeuThrLeuArgGluPheTyrMet

496 GCCTTCCAAGTGGTTCAGCTCAGCCTCGCCCCGAGGACAGGGTC
AlaPheGlnValValGlnLeuSerLeuAlaProGluAspArgVal

541 AGTGTGACCACAGTGACCGTGGGGCTGAGCACAGTGCTGACCTGC
SerValThrThrValThrValGlyLeuSerThrValLeuThrCys

586 GCCGTCCATGGAGACCTGAGGCCACCAATCATCTGGAAGCGCAAC
AlaValHisGlyAspLeuArgProProIleIleTrpLysArgAsn

631 GGGCTCACCTGAACTTCCTGGACTTGAAGACATCAATGACTTT
GlyLeuThrLeuAsnPheLeuAspLeuGluAspIleAsnAspShe

676 GGAGAGGATGATTCCCTGTACATCACCAAGGTGACCACCATCCAC
GlyGluAspAspSerLeuTyrIleThrLysValThrThrIleHis

721 ATGGGCAATTACACCTGCCATGCTTCCGCCACGAGCAGCTGTTC
MetGlyAsnTyrThrCysHisAlaSerGlyHisGluGlnLeuPhe

766 CAGACCCACGTCCTGCAGGTGAATGTGCCGCCAGTCATCCGTGTC
GlnThrHisValLeuGlnValAsnValProProValIleArgVal

Fig. 7

811 TATCCAGAGAGCCAGGCACAGGAGCCTGGAGTGGCAGCCAGCCTA
 TyrProGluSerGlnAlaGlnGluProGlyValAlaAlaSerLeu
 856 AGATGCCATGCTGAGGGCATTCCCATGCCCAGAATCACTTGGCTG
 ArgCysHisAlaGluGlyIleProMetProArgIleThrTrpLeu
 901 AAAAACGGCGTGGATGTCTCAACTCAGATGTCCAAACAGCTCTCC
 LysAsnGlyValAspValSerThrGlnMetSerLysGlnLeuSer
 946 CTTTGTAGCCAATGGGAGCGAACTCCACATCAGCAGTGTTCGGTAT
 LeuLeuAlaAsnGlySerGluLeuHisIleSerSerValArgTyr
 991 GAAGACACAGGGGCATACACCTGCATTGCCAAAAATGAAGTGGGT
 GluAspThrGlyAlaTyrThrCysIleAlaLysAsnGluValGly
 1036 GTGGATGAAGATATCTCCTCGCTCTTCATTGAAGACTCAGCTAGA
 ValAspGluAspIleSerSerLeuPheIleGluAspSerAlaArg
 1081 AAGACCCCTTGCAAACATCCTGTGGCGAGAGGAAGGTACCAAGCTT
 LysThrLeuAlaAsnIleLeuTrpArgGluGluGlyThrLysLeu
 1126 CATTGTTTTGCGTCATGCCTGTGATCACGTGTGTTTGGTTCTATG
 HisCysPheAlaSerCysLeu
 1171 ATGGGCCCGTCTTTCCATGATCTGCCACCAGCTTTCCACACAAAG
 1216 CAGCCCTATGGGAGCAGGAAGTCAATGTCAAATTCAAGTGGCATA
 1261 TGCATTGAATCAAATTTAAAATGTACTCCTGTCTTTAATGAGAAA
 1306 TTTTTAAATGCAAAGCTTTCATTAAAAGTGGCTTGTAACCTCTGC
 1351 TGAAGCAGAACAGTTGGTAAGGGTTCCTGGTCAGATCTGGGCCTT
 1396 AAACTTTTTCCAGTAGCTGACTGGTGTGGGTTTAGTGTTTTGC
 1441 CTATCTTGTGTGGTTTTAAAAAGACAAAACAAGTTGTAGATCTCT
 1486 ACTAGATAGTCACTGTACCTTAAATATGCTTTGATTGAGGAAAAC
 1531 CCGAGGAAAAAGCTGCCATGATTTCTGCCAATGTATATTTTTTAAA
 1576 TGTATAGATGTTTAGAAACATATTTATCAAGCAAATCTTTAGTAA
 1621 GTTGAGCCATATGAAGTTGCCATTTTTGTGCATCAAAGTGGTCTA
 1666 AGATTGACAATTTTCATATGGCTGA

Fig. 7 (continued)

Fig. 8

2241 TTCATCTTCAACAAGTCTGATCCTGCAGTCCACAAGGTGGACCTGGAAACAATGATGCCCTCAAGACCATCGGCTGCA
 PheIlePheAsnLysSerAspProAlaValHisLysValAspLeuGluThrMetMetProLeuLysThrIleGlyLeuHi
 2321 CCACCATGGCTGCGTGGCCAGGCATGGCACACCCACCTGGGCGGCTACTTCTTCATCCAGTGGCCAGGACAGCC
 sHisHisGlyCysValProGlnAlaMetAlaHisThrHisLeuGlyGlyTyrPhePheIleGlnCysArgGlnAspSerP
 2401 CCGCTCTGCTGCCCCAGAGTGTCTGTTGACAGTGTACAGACTCTGTGCTTGGCCCCAATGGTGATGTAACAGGCACC
 roAlaSerAlaAlaArgGlnLeuLeuValAspSerValThrAspSerValLeuGlyProAsnGlyAspValThrGlyThr
 2481 CCACACACATCCCCGACGGGCGCTTCATAGTCAGTGTGCAGTGCAGAGCCCCGGCTGCACGTGCAGGAGATCACAGT
 ProHisThrSerProAspGlyArgPheIleValSerAlaAlaAlaAspSerProTrpLeuHisValGlnGluIleThrVa
 2561 GCGGGGCGAGATCCAGACCTGTATGACCTGCAATAAACTCGGGCATCTCAGACTTGGCCTTCCAGCGCTCCTTCACTG
 lArgGlyGluIleGlnThrLeuTyrAspLeuGlnIleAsnSerGlyIleSerAspLeuAlaPheGlnArgSerPheThrG
 2641 AAAGCAATCAATACAACATCTACGCGGCTCTGCACACGGAGCCGGACCTGCTGTCTCTGGAGCTGTCCACGGGAAGGTG
 luSerAsnGlnTyrAsnIleTyrAlaAlaLeuHisThrGluProAspLeuLeuPheLeuGluLeuSerThrGlyLysVal
 2721 GGCATGCTGAAGAACTTAAAGGAGCCACCCGAGGGCCAGCTCAGCCTGGGGGGTACCCACAGAATCATGAGGACAG
 GlyMetLeuLysAsnLeuLysGluProProAlaGlyProAlaGlnProTrpGlyGlyThrHisArgIleMetArgAspSe
 2801 TGGGCTGTTTGGACAGTACCTCCTCACACCAGCCCCGAGAGTCACTGTTCTCATCAATGGGAGACAAAACAGCTGCGGT
 rGlyLeuPheGlyGlnTyrLeuLeuThrProAlaArgGluSerLeuPheLeuIleAsnGlyArgGlnAsnThrLeuArgC
 2881 GTGAGGTGTGAGGTATAAAGGGGGGACACAGTGGTGTGGGTGGGTGAGGTATGAAGGGCCAGAGCAGAGCCTGGGC
 ysGluValSerGlyIleLysGlyGlyThrThrValValTrpValGlyGluVal
 2961 CAAGGAACACCCCTAGTCTGACACTGCAGCCTCAAGCAGGTACGCTGTACATTTTTACAGACAAAAGCAAAAACCTGT
 3041 ACTCGCTTTGTGGTTCAACACTGGTCTCCTTGCAAGTTTCTAGTATAAGGTATGCGCTGCTACCAAGATTGGGGTTTTT
 3121 TCGTTAGGAAGTATGATTTATGCCCTTGAGCTACGATGAGAACATATGCTGCTGTGTAAAGGGATCATTTCTGTGCCAAGC
 3201 TGCACACCCGAGTGACCTGGGGACATCATGGAACCAAGGGATCCTGCTCTCCAAGCAGACACCTCTGTCAAGTTGCCCTCAC
 3281 ATAGTCATTGTCTCCTTACTGCCAGACCCAGCCAGACTTTGCCCTGACGGAGTGGCCCCGAAGCAGAGGCCGACAGGAGC
 3361 AGGGGCTCCCTCCCGAACTGAAAGCCCATCCGCTCTCGCGTGGGACCGCATCTCTCTCCCTCGCAGTGTCTTCTGCTTT
 3441 TCTTTCCATTGACTTGCTGTAAGCCTGAGGGAGAGCCAACAAGACTTACTGCATCTTGGGGGATGGGGAAATCACTCAC
 3521 TTTATTTTGGAAATTTTGATTAAAAAAAATTTTATAATCTCAATGCTAGTAAGCAGAAAGATGCTCTCCGAGGTCCA
 3601 ACTATATCCTTCCCTGCTTAGGCCGAGTCTCGGGGTTGGTCACAACCCACATCCACAGCCAGAAAGAAATAGGTCA
 3681 TCTGAGAACTACTGGCCCTGTGACTATTGCCACCCCTGCTTCTCCAAGAGCAGACAGGCCACCTCATCCGTAAGGACTCG
 3761 GTTCTGTGTGGGACCCCAAAAACAGAAACAGTTCTGTGTGCTCCTTTTCCAGCACAGAAGGGAGACATCTCATTAGTC
 3841 AGGTCTGGTACCCAGATTCAAGGCAGACTGGGCTTGCCCTGGCAAGGTATGGGTGGCCTCCAGGCTCAATGCAGAAACCC
 3921 CAAGGACACAGTGGGGCCAGGTGAGTTCTTGAAGCTATACCTTTTCAAAACAGATTTTGTTTTCTTACCTGTGGCCCAT
 4001 CCACCTCTCTTGGTACCCCATCCCGCATCAGCACTGCAGAGAGAACAATTTCGGCGAGGGTTTTCTTACCCACATTTC
 4081 CCCAATCAATACACACACTGCAGAACCCAGAACAGAGCCACAGGCTGGCACTACTGCATTCTCTTATGTGTCTCA
 4161 GCTCTGGTGACTCTCAGTGGGCATCGAAGAAAGTACAACCCACATAGCCCTCTGGAGACCGCCTAGATCAGAGACTCAG
 4241 CAAAAACAGGCTCGCCTTCCCTCTCCACATATGAGTGGAACTTACATGTGTCTGGTTTGAATGATCATTTTGAAGCC
 4321 ACACGGGTTGGGAGAGGTGGTCTACCCACAGAGCTTTTGCTAATTTGGCCACCTTCACCTACTGACATGACCAGGATTT
 4401 TCCTTTGCCATTAAAGGAATGAACCTTTTCAAGGAGAGGAAACCTTAGACTCTGTGTCACTCTCAACACACACAGCTCCTT
 4481 TCACTCCTGCTGACTGCCAAGCCACCTGCATCCCCGCCCCAGATCTCATGAGATCAATCACTTGTATGTCTCAGCAA
 4561 CTGGTCCACCAAACGCTGTCCCTGTAACTCTAGGGGTGCGCTAGACAGGTACGTCTGTTTTATTTTAAAGAT
 4641 ATGCTATGTAGATATAAGTTGAGGAAGCTCACCTCAAAAGCCTAGAATGCAGTTTCACAGTAGCTGGGATGCATGGATGA
 4721 CCCATCTACCCCTTTTTTTTTCTGCTCAATATCTTGATATGTTATGTTTACTCCCAATCTCCCATTTTTACCACTAA
 4801 AATTCCTCAACTTTTCAAACTTTTTTTTTGGAAAAATTTCCATTGTATCAGCCCCGACAGAAAAGGATCTCTGAGCCT
 4881 AAAGGAGGAAAAGTCCCACTTACCAGACAGAACAGAGCCCTCTGGGAGCAGGATTCCTAAGTCAAAGACCACT
 4961 TTGACCCCAACTGGCCTTTTAAAAATATCAGGAGTGACAGAGTCAACTTCTGCAGCACCTGCTTCTCCCCACTGTCCCT
 5041 TCCATCTTGGAAATGTGTCTAAAAAAGCATAGCTGCCCTTTGCTGTCTCAGAGTGCATTTCTGGAGACGGCAGGCTTAG
 5121 GTCTCACTGACAGCATGCCAGACACAATGAATCGAAGCAGGCCTGAAGCCTAGGTGAGGTTTCAGGAGTCCAGCCCCA
 5201 GGAGGCAAGTACCAATGCAGGGAGGTAAATGCCTTTTGGCAGGAAAACCAATAGAGTTGGTTGGGTGGGAGTCAAGG
 5281 GTGGGAGGAGAAGGAGGAAGAGGAGGAAGGCCAGACTGGCCTGCCCTTTCTCCCATACTTCACCCAGCAGAGGTTTCATG
 5361 GGACACAGTTGGAAGCCACTGGGAGGAAATGCCTCACTACAGGGGGGCTCTGTAGCAAGCCAGCCGGTAATCCTCC
 5441 TAATGAACCCACAAGGTCAATTCAAACTGATATCTTAGCTATTAAAGAACTACTGACTTTACCAAAAGAAATCATCAAGA
 5521 AAGCTATTTATATAAACCCCTCAGTCATTTTGAATAAAATTAATTTTACAA

Fig. 8 (continued)

FRAME: 3 - NUCLEOTIDE 420 TO 2864

1
 CAATTTACACAGGAAACAGCTATGCCATGATTACGCAAGTTGGTACCGAGCTCGGATCCACTAGTAACGGCCGCCAGTG
 81
 TGCTGGAATTTCGGCTTACTCACTATAGGGCTCGAGCGGCTGCCCGGCAGGTCATTAATTCATTCTTTTAGAGTATC
 161
 ACAGCTTTCTCCTTCACTGACCACCTTTGCTTCTGTGAGAAAGCCCTGGACAGAACTCTCTGTGGGATTCTGCCCATG
 241
 TTTCTGAGATATCGCCTCAATTGCTCTGGCTGGGCTGTGGGTCTGCCCCGTTTTACAGATGGGCAAACCTGGAGTGGGAAG
 321
 TATCCGGGTGGCTTCTCAGGCCTGCAGCTGGTGGAGCAGCTACTGAAACAATCAGGAGCCCAGAAGCTTTGAAGTCACA
 401
 AGAAGAGAAGACTCCCAGAATGCAGTGTGATGTTGGTGTGGAGCGCTGTTTCGCCTTTCACTTAAACGTGCCCTTTCCA
 MetGlnCysAspValGlyAspGlyArgLeuPheArgLeuSerLeuLysArgAlaLeuSerS
 481
 GCTGCCCTGACCTCTTTGGGCTTTCCAGCCGCAACGAGCTGCTGGCCTCTGCGGGAAGAAGTTCTGCAGCCGAGGGAGC
 erCysProAspLeuPheGlyLeuSerSerArgAsnGluLeuLeuAlaSerCysGlyLysLysPheCysSerArgGlySer
 561
 CGGTGCGTGCCTCAGCAGGAAGACAGGGGAGCCCGAATGCCAGTGCCTGGAGGCATGCAGGCCAGCTACGTGCCTGTGTG
 ArgCysValLeuSerArgLysThrGlyGluProGluCysGlnCysLeuGluAlaCysArgProSerTyrValProValCy
 641
 CGGCTCTGATGGGAGGTTTTATGAAAACCACTGTAAGCTCCACCGTCTGCTTGCCTCCTGGGAAAGAGGATCACCGTCA
 sGlySerAspGlyArgPheTyrGluAsnHisCysLysLeuHisArgAlaAlaCysLeuLeuGlyLysArgIleThrValI
 721
 TCCACAGCAAGGACTGTTTCTCAAGGTGACACGTGCACCATGGCCGGCTACGCCCGCTTGAAGAATGTCTTCTGGCA
 leHisSerLysAspCysPheLeuLysGlyAspThrCysThrMetAlaGlyTyrAlaArgLeuLysAsnValLeuLeuAla
 801
 CTCCAGACCCGTCTGCAGCCACTCCAAGAAGGAGACAGCAGACAAGACCCCTGCCTCCCAGAAGCGCCTCTGGTGAATC
 LeuGlnThrArgLeuGlnProLeuGlnGluGlyAspSerArgGlnAspProAlaSerGlnLysArgLeuLeuValGluSe
 881
 TCTGTTTCAAGGACTTAGATGCAGATGGCAATGGCCACCTCAGCAGCTCCGAACTGGCTCAGCATGTGCTGAAGAAGCAGG
 rLeuPheArgAspLeuAspAlaAspGlyAsnGlyHisLeuSerSerSerGluLeuAlaGlnHisValLeuLysLysGlnA
 961
 ACCTGGATGAAGACTTACTTGGTTGCTCACCAGGTGACCTCTCCGATTTGACGATTACAACAGTGACAGCTCCCTGACC
 spLeuAspGluAspLeuLeuGlyCysSerProGlyAspLeuLeuArgPheAspAspTyrAsnSerAspSerSerLeuThr
 1041
 CTCGCGAGTTCTACATGGCCTTCCAAGTGGTTCAGCTCAGCCTCGCCCCGAGGACAGGGTCAGTGTGACCACAGTGAC
 LeuArgGluPheTyrMetAlaPheGlnValValGlnLeuSerLeuAlaProGluAspArgValSerValThrThrValTh
 1121
 CGTGGGGCTGAGCACAGTGTGACCTGCGCCGTCATGGAGACCTGAGGCCACCAATCATCTGGAAGCGCAACGGGCTCA
 rValGlyLeuSerThrValLeuThrCysAlaValHisGlyAspLeuArgProProIleIleTrpLysArgAsnGlyLeuT
 1201
 CCCTGAACTTCCTGGACTTGAAGACATCAATGACTTTGGAGAGGATGATTCCTGTACATCACCAAGGTGACCACCATC
 hrLeuAsnPheLeuAspLeuGluAspIleAsnAspPheGlyGluAspAspSerLeuTyrIleThrLysValThrThrIle
 1281
 CATATGGGCAATTACCTGCCATGCTTCCGGCCACGAGCAGCTGTTCCAGACCCACGTCCTGCAGGTGAATGTGCCGCC
 HisMetGlyAsnTyrThrCysHisAlaSerGlyHisGluGlnLeuPheGlnThrHisValLeuGlnValAsnValProPr

Fig. 9

1361 AGTCATCCGTGTCTATCCAGAGAGCCAGGCACAGGAGCCTGGAGTGGCAGCCAGCCTAAGATGCCATGCTGAGGGCATTCC
 oValIleArgValTyrProGluSerGlnAlaGlnGluProGlyValAlaAlaSerLeuArgCysHisAlaGluGlyIleP
 1441 CCATGCCAGAAATCACTTGGCTGAAAAACGGCGTGGATGTCTCAACTCAGATGTCCAAACAGCTCTCCCTTTTAGCCAAT
 roMetProArgIleThrTrpLeuLysAsnGlyValAspValSerThrGlnMetSerLysGlnLeuSerLeuLeuAlaAsn
 1521 GGGAGCGAACTCCACATCAGCAGTGTTCGGTATGAAGACACAGGGGCATACCTGCATTGCCAAAAATGAAGTGGGTGT
 GlySerGluLeuHisIleSerSerValArgTyrGluAspThrGlyAlaTyrThrCysIleAlaLysAsnGluValGlyVa
 1601 GGATGAAGATATCTCTCGCTCTTCATTGAAGACTCAGCTAGAAAGACCCCTTGCAAACATCCTGTGGCGAGAGGAAGGCC
 lAspGluAspIleSerSerLeuPheIleGluAspSerAlaArgLysThrLeuAlaAsnIleLeuTrpArgGluGluGlyL
 1681 TCAGCGTGGGAAACATGTTCTATGTCTTCTCCGACGACGGTATCATCGTCATCCATCCTGTGGACTGTGAGATCCAGAGG
 euSerValGlyAsnMetPheTyrValPheSerAspAspGlyIleIleValIleHisProValAspCysGluIleGlnArg
 1761 CACCTCAAACCCACGGAAAAGATTTTCATGAGCTATGAAGAAATCTGTCTCAAAGAGAAAAAATGCAACCCAGCCCTG
 HisLeuLysProThrGluLysIlePheMetSerTyrGluGluIleCysProGlnArgGluLysAsnAlaThrGlnProCy
 1841 CCAGTGGGTATCTGCAGTCAATGTCCGGAACCGGTACATCTATGTGGCCAGCCAGCACTGAGCAGAGTCCCTTGTGGTCG
 sGlnTrpValSerAlaValAsnValArgAsnArgTyrIleTyrValAlaGlnProAlaLeuSerArgValLeuValVala
 1921 ACATCCAAGCCCAGAAAGTCCTACAGTCCATAGGTGTGGACCCCTCTGCCGGCTAAGCTGTCTATGACAAGTCACATGAC
 spIleGlnAlaGlnLysValLeuGlnSerIleGlyValAspProLeuProAlaLysLeuSerTyrAspLysSerHisAsp
 2001 CAAGTGTGGGTCTGAGCTGGGGGACGTGCACAAGTCCCGACCAAGTCTCCAGGTGATCACAAGCCAGCACCAGGCCA
 GlnValTrpValLeuSerTrpGlyAspValHisLysSerArgProSerLeuGlnValIleThrGluAlaSerThrGlyGl
 2081 GAGCCAGCACCTCATCCGCACACCCCTTTCAGGAGTGGATGATTTCTTCATTCCTCCCAACAAACCTCATCATCAACCACA
 nSerGlnHisLeuIleArgThrProPheAlaGlyValAspAspPhePheIleProProThrAsnLeuIleIleAsnHisI
 2161 TCAGGTTTGGCTTCATCTTCAACAAGTCTGATCCTGCAGTCCACAAGGTGGACCTGGAAACAATGATGCCCTCAAGACC
 leArgPheGlyPheIlePheAsnLysSerAspProAlaValHisLysValAspLeuGluThrMetMetProLeuLysThr
 2241 ATCGGCCTGCACCACCATGGCTGCGTGCCCCAGGCCATGGCACACACCCACCTGGGCGGCTACTTCTTCATCCAGTGGCCG
 IleGlyLeuHisHisHisGlyCysValProGlnAlaMetAlaHisThrHisLeuGlyGlyTyrPhePheIleGlnCysAr
 2321 ACAGGACAGCCCCGCTCTGCTGCCCCAGAGCTGCTCGTTGACAGTGTACAGACTCTGTGCTTGGCCCCAATGGTGATG
 gGlnAspSerProAlaSerAlaAlaArgGlnLeuLeuValAspSerValThrAspSerValLeuGlyProAsnGlyAspV
 2401 TAACAGGCACCCACACACATCCCCGACGGCGCTTCATAGTCACTGCTGCAGCTGACAGCCCTGGCTGCAGTGCAG
 alThrGlyThrProHisThrSerProAspGlyArgPheIleValSerAlaAlaAlaAspSerProTrpLeuHisValGln
 2481 GAGATCAGTGCAGGGCGAGATCCAGACCTGTATGACCTGCAAATAAACTCGGGCATCTCAGACTTGGCCTTCCAGCG
 GluIleThrValArgGlyGluIleGlnThrLeuTyrAspLeuGlnIleAsnSerGlyIleSerAspLeuAlaPheGlnAr
 2561 CTCCTTCACTGAAAGCAATCAATACAACATCTACGCGGCTCTGCACACGGAGCCGGACCTGCTGTTCTGGAGCTGTCCA
 gSerPheThrGluSerAsnGlnTyrAsnIleTyrAlaAlaLeuHisThrGluProAspLeuLeuPheLeuGluLeuSert

Fig. 9 (continued)

2641
 CGGGGAAGGTGGGCATGCTGAAGAACTTAAAGGAGCCACCCGAGGGCCAGCTCAGCCCTGGGGGGGTACCCACAGAATC
 hrGlyLysValGlyMetLeuLysAsnLeuLysGluProProAlaGlyProAlaGlnProTrpGlyGlyThrHisArgIle
 2721
 ATGAGGGACAGTGGGCTGTTTGGACAGTACCTCCTCACACCAGCCGAGAGTCACTGTTCTCATCAATGGGAGACAAAA
 MetArgAspSerGlyLeuPheGlyGlnTyrLeuLeuThrProAlaArgGluSerLeuPheLeuIleAsnGlyArgGlnAs
 2801
 CACGCTGCGGTGTGAGGTGTCAGGTATAAAGGGGGGACCACAGTGGTGTGGGTGGGTGAGGTATGAAGGGCCAGAGCA
 nThrLeuArgCysGluValSerGlyIleLysGlyGlyThrThrValValTrpValGlyGluVal
 2881
 GAGCCCTGGGCCAAGGAACACCCCTAGTCTGACACTGCAGCCTCAAGCAGGTACGCTGTACATTTTTACAGACAAAAG
 2961
 CAAAAACCTGTACTCGCTTTGTGGTTCAACACTGGTCTCCTTGCAAGTTTCTAGTATAAGGTATGCGCTGCTACCAAGA
 3041
 TTGGGGTTTTTTTCGTTAGGAAGTATGATTTATGCCTTGAGCTACGATGAGAACATATGCTGCTGTGTAAAGGGATCATTT
 3121
 CTGTGCCAAGCTGCACACCGAGTGACCTGGGGACATCATGGAACCAAGGGATCCTGCTCTCCAAGCAGACACCTCTGTCA
 3201
 GTTGCCCTTCACATAGTCATTGTCCCTTACTGCCAGACCCAGCCAGACTTTGCCCTGACGGAGTGGCCCGAAGCAGAGGC
 3281
 CGACCAGGAGCAGGGGCCCTCCCTCCCGAACTGAAAGCCCATCCGTCCTCGCGTGGGACCGCATCTTCTCCCTCGCAGCTG
 3361
 CTTCTTGCTTTTCTTTCCATTGACTTGCTGTAAGCCTGAGGAGAGCCAACAAGACTTACTGCATCTTGGGGGATGGGG
 3441
 AAATCACTCACTTTATTTTGGAAATTTTGTATTAAAAAAATTTTATAATCTCAAATGCTAGTAAGCAGAAAGATGCTC
 3521
 TCCGAGGTCCAATATATCCTTCCCTGCCCTAGGCCGAGTCTCGGGGTGGTCAACAACCCACATCCACAGCCAGAAAG
 3601
 AACAAATGGTCATCTGAGAATACTGGCCCTGTGCGACTATTGCCACCCTGCTTCTCCAAGAGCAGACCAGGCCACCTCATCC
 3681
 GTAAGGACTCGGTTCTGTGTTGGGACCCCAAAAACCAGAACAAGTTCTGTGTGCCTCCTTTCAGCACAGAAGGGAGACA
 3761
 TCTCATTAGTCAGGTCTGGTACCCAGATTACAGGGCAGACTGGGCTTGCTGGCAAGGTATGGGTGGCCTCCAGGCTCAA
 3841
 TGCAGAAACCCCAAGGACACGAGTGGGGCCAGGTGAGTTCTGAAGCTATACCTTTTCAAAACAGATTTTGTTTTCTTAC
 3921
 CTGTGGCCCATCCACTCCTCTCTGGTACCCCATCCCGCATCAGCACTGCAGAGAGAACACATTTGGGCGAGGGTTTTCT
 4001
 TACCCACATTTCCCAATCAATACACACACTGCAGAACCAGAACAGAAGGCCACAGGCTGGCACTACTGCATTCTCCT
 4081
 TATGTGCTCTCAGGCTGTGGTGACTCTCACATGGGCATCGAAGAAGTACAACCCACATAGCCCTCTGGAGACCGCTAGAT
 4161
 CAGAGACTCAGCAAAAACAGGCTCGCCTTCCCTCTCCACATATGAGTGGAACTTACATGTGTCTGGTTTGAATGATCA
 4241
 TTTTGCAAGCCACACGGGTGGGAGAGGTGGTCTCACCACAGACGTCTTTGCTAATTTGGCCACCTTCACCTACTGACAT
 4321
 GACCAGGATTTTCCTTTGCCATTAAGGAATGAACCTTTTCAAGGAGAGGAAACCTAGACTCTGTGTCACTCTCAACACA
 4401
 CACAGCTCCTTTCACTCCTGCCTGACTGCCAAGCCACCTGCATCCCCGCCCCAGATCTCATGAGATCAATCACTTGTAT

Fig. 9 (continued)

4481 GTCTCAGCAACTTGGTCCACCAzACGCCTGTCCCCTGTAACCTAGGGGTGCGCCTAGACAGGTACGTCTGTTTTTA
4561 TTTTAAAGATATGCTATGTAGATATAAGTTGAGGAAGCTCACCTCAAAAGCCTAGAATGCAGTTTCACAGTAGCTGGGA
4641 TGCATGGATGACCCATCTCACCCCTTTTTTTTCTGCCTCAATATCTTGATATGTTATGTTTACTCCCAATCTCCCAT
4721 TTTTACCATAAAATCTCCAACCTTTCATAAACTTTTTTTTGGAAAAATTTCCATTGTATCAGCCCCTGACAGARAAAGGA
4801 TCTCTGAGCCTAAAGGAGGAAAAGTCCCACCAACTACCAGACCAGAACACGAGCCCCCTCTGGGCAGCAGGATTCTTAAGT
4881 CAAAGACCAGTTTGACCCAACTGGCCTTTTAAATAATCAGGAGTGACAGAGTCAACTTCTGCAGCACCTGCTTCTCCC
4961 CCACTGTCCCTTCCATCTTGAATGTGTCTAAAAAAGCATAGCTGCCCTTTGCTGTCTCAGAGTGCAATTTCTGGAGAC
5041 GGCAGGCTTAGGTCTCACTGACAGCATGCCAGACACAACCTGAATCGAAGCAGGCCTGAAGCCTAGGTCAGGTTTCAGGA
5121 GTCCAGCCCAGGAGGCAAAGTCACCAATGCAGGGAGGTAATGCCTTTTGGCAGGAAAACCAATAGAGTTGGTTGGGTG
5201 GGGAGTCAGGGGTGGGAGGAGAAGGAGGAAGAGGAGGAAGGCCAGACTGGCCTGCCCTTTCTCCCATACTTCACCCAGC
5281 AGAGGTTTCATGGGACACAGTTGGAAGCCACTGGGAGGAAATGCCTCACTACAGGGGGGCTCCTGTAGCAAGCCCAGCC
5361 GGTAACTCTCCTAATGAACCCACAAGGTCAATTCACACTGATATCTTAGCTATTAAAGAAGTACTGACTTTACCARAAG
5441 AATCATCAAGAAAGCTATTTATATAAACCCCTCAGTCATTTTGAAATAAAATTAATTTTAC

Fig. 9 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 124 TO 1089

1 CTTTGCTTCAGCCGCGAGTCGCCACTGGCTGCCTGAGGTGCTCTTA
46 CAGCCTGTTCCAAGTGTGGCTTAATCCGTCTCCACCACCAGATCT

91 TTCTCCGTGGATTCTCTGCTAAGACCGCTGCCATGCCAGTGACG
MetProValThr

136 GTAACCCGCACCACCATCACAACCACCACGACGTCATCTTCGGGC
ValThrArgThrThrIleThrThrThrThrSerSerSerGly

181 CTGGGGTCCCCATGATCGTGGGGTCCCCTCGGGCCCTGACACAG
LeuGlySerProMetIleValGlySerProArgAlaLeuThrGln

226 CCCCTGGGTCTCCTTCGCCTGCTGCAGCTGGTGTCTACCTGCGTG
ProLeuGlyLeuLeuArgLeuLeuGlnLeuValSerThrCysVal

271 GCCTTCTCGCTGGTGGCTAGCGTGGGCGCCTGGACGGGGTCCATG
AlaPheSerLeuValAlaSerValGlyAlaTrpThrGlySerMet

316 GGCAACTGGTCCATGTTACCTGGTGCTTCTGCTTCTCCGTGACC
GlyAsnTrpSerMetPheThrTrpCysPheCysPheSerValThr

361 CTGATCATCTCATCGTGGAGCTGTGCGGGCTCCAGGCCCGCTTC
LeuIleIleLeuIleValGluLeuCysGlyLeuGlnAlaArgPhe

406 CCCCTGTCTTGGCGCAACTTCCCCATCACCTTCGCCTGCTATGCG
ProLeuSerTrpArgAsnPheProIleThrPheAlaCysTyrAla

451 GCCCTCTTCTGCCTCTCGGCCTCCATCATCTACCCACCACCTAT
AlaLeuPheCysLeuSerAlaSerIleIleTyrProThrThrTyr

496 GTCCAGTTCCTGTCCCACGGCCGTTCGCGGGACCACGCCATCGCC
ValGlnPheLeuSerHisGlyArgSerArgAspHisAlaIleAla

541 GCCACCTTCTTCTCCTGCATCGCGTGTGTGGCTTACGCCACCGAA
AlaThrPhePheSerCysIleAlaCysValAlaTyrAlaThrGlu

586 GTGGCCTGGACCCGGGCCCCGGCGGAGATCACTGGCTATATG
ValAlaTrpThrArgAlaArgProGlyGluIleThrGlyTyrMet

631 GCCACCGTACCCGGGCTGCTGAAGGTGCTGGAGACCTTCGTTGCC
AlaThrValProGlyLeuLeuLysValLeuGluThrPheValAla

676 TGCATCATCTTCGCGTTCATCAGCGACCCCAACCTGTACCAGCAC
CysIleIlePheAlaPheIleSerAspProAsnLeuTyrGlnHis

Fig. 10

721 CAGCCGGCCCTGGAGTGGTGCCTGGCGGTGTACGCCATCTGCTTC
GlnProAlaLeuGluTrpCysValAlaValTyrAlaIleCysPhe

766 ATCCTAGCGGCCATCGCCATCCTGCTGAACCTGGGGGAGTGCACC
IleLeuAlaAlaIleAlaIleLeuLeuAsnLeuGlyGluCysThr

811 AACGTGCTACCCATCCCCTTCCCCAGCTTCTGTGCGGGCTGGCC
AsnValLeuProIleProPheProSerPheLeuSerGlyLeuAla

856 TTGCTGTCTGTCTCCTCTATGCCACCGCCCTTGTTCTCTGGCCC
LeuLeuSerValLeuLeuTyrAlaThrAlaLeuValLeuTrpPro

901 CTCTACCAGTTCGATGAGAAGTATGGCGGCCAGCCTCGGCGCTCG
LeuTyrGlnPheAspGluLysTyrGlyGlyGlnProArgArgSer

946 AGAGATGTAAGCTGCAGCCGCAGCCATGCCTACTACGTGTGTGCC
ArgAspValSerCysSerArgSerHisAlaTyrTyrValCysAla

991 TGGGACCGCCGACTGGCTGTGGCCATCCTGACGGCCATCAACCTA
TrpAspArgArgLeuAlaValAlaIleLeuThrAlaIleAsnLeu

1036 CTGGCGTATGTGGCTGACCTGGTGCCTCTGCCCCACCTGGTTTTT
LeuAlaTyrValAlaAspLeuValHisSerAlaHisLeuValPhe

1081 GTCAAGGTCTAAGACTCTCCCAAGAGGCTCCCGTTCCCTCTCCAA
ValLysVal

1126 CCTCTTTGTTCTTCTTGCCCGAGTTTCTTTATGGAGTACTTCTT

1171 TCCTCCGCCTTTCCTCTGTTTTCTCTTCCTGTCTCCC

Fig. 10 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 587 TO 1012

1 GGAAGAAGAAGGAGGAGGAGGAGAAGGAGAAGAAGAAGGAGAAGA
 46 ACGCAAGACTTCGTCTCAAAAAAAAAAGAAGAAAAAATTAAATAC
 91 ATTTAAAAAAGAAGGTTGCATGCTGTGGAGCAACCAGACAATTGT
 136 GATGAAATGTGAAGCACAAGGCACCAGCTGTGACGTGTTTTGCC
 181 AAGAAGTCAAACCACGTTCCAACTAAACCTCTAGAGCAAACTTTC
 226 ATTTTCAGCAAATTTCGAAGAAAAGAGGAATAATGTAAATGACCCC
 271 ACAGGGAAACAGACAAACCCTGAATGTGGAGCATTTACAGGACA
 316 AAACCTGGACAGACATCGGAACACTTACAGGATGTGTGTAGTGTG
 361 GCATGACAGAGAACTTTGGTTTCCTTTAATGTGACTGTAGACCTG
 406 GCAGTGTTACTATAAGAATCACTGGCAATCAGACACCCGGGTGTG
 451 CTGAGCTGGCACTCAGTGGGGCGGCTACTGCTCATGTGATTGTG
 496 GAGTAGACAGTTGGAAGAAGTACCCAGTCCATTTGGAGAGTTAAA
 541 ACTGTGCCTAACAGAGGTGTCCTCTGACTTTTCTTCTGCAAGCTC

 586 CATGTTTTACATCTTCCCTTTGACTGTGTCCTGCTGCTGCTGCT
 MetPheSerHisLeuProPheAspCysValLeuLeuLeuLeuLe

 631 GCTACTACTTACAAGGTCCTCAGAAGTGAATACAGAGCGGAGGT
 uLeuLeuLeuThrArgSerSerGluValGluTyrArgAlaGluVa

 676 CGGTCAGAATGCCTATCTGCCCTGCTTCTACACCCAGCCGCCCC
 lGlyGlnAsnAlaTyrLeuProCysPheTyrThrProAlaAlaPr

 721 AGGGAACCTCGTGCCCGTCTGCTGGGGCAAAGGAGCCTGTCCTGT
 oGlyAsnLeuValProValCysTrpGlyLysGlyAlaCysProVa

 766 GTTTGAATGTGGCAACGTGGTGCTCAGGACTGATGAAAGGGATGT
 lPheGluCysGlyAsnValValLeuArgThrAspGluArgAspVa

 811 GAATTATTGGACATCCAGATACTGGCTAAATGGGGATTTCCGCAA
 lAsnTyrTrpThrSerArgTyrTrpLeuAsnGlyAspPheArgLy

 856 AGGAGATGTGTCCCTGACCATAGAGAATGTGACTCTAGCAGACAG
 sGlyAspValSerLeuThrIleGluAsnValThrLeuAlaAspSe

 901 TGGGATCTACTGCTGCCGGATCCAAATCCCAGGCATAATGAATGA
 rGlyIleTyrCysCysArgIleGlnIleProGlyIleMetAsnAs

 946 TGAAAAATTTAACCTGAAGTTGGTCATCAAACCAGGTGAGTGGAC
 pGluLysPheAsnLeuLysLeuValIleLysProGlyGluTrpTh

 991 ATTTGCATGCCATCTTTATGAATAAGATTTATCTGTGGATCATAT
 rPheAlaCysHisLeuTyrGlu

 1036 TAAAGGTACTGATTGTTCTCATCTCTGACTTCCCTAATTATAGCC
 1081 CTGGAGGAGGCCACTAAGACCTAAAGTTTAACAGGCCCCATTGG
 1126 TGATGCTCAGTGATATTTAACACCTTCTCTGTGTTTTAAACTCA
 1171 TGGGTGTGCCTGGGCGTGGTGGCTCACACCTCT

Fig. 11

TRANSLATED PROTEIN - NUCLEOTIDE 494 TO 769

1 TCTAGAACATTCTCCAGCCCTTTTTTCTTTTGCTCTTTTATGAC
 46 ATTGACATGAAGAGTCCGGGCCAGTTGTTCTGGATTGTCTGATT
 91 GCTTCTCCCTGGTTGGAGTCAGGTGGAACAGCTCTGGCAGGAACG
 136 CCCCCCGGGCAATGCAGAGTCCTCCTCCAGGAGGCACTTAGTGT
 181 CCATGCGTCACCTTGCTGGTGATGCTTCACTGGATCACTTGGTTC
 226 CGGGGTTGTCCGCACGTCTCCCTGTAAGTGCAGGTGCTCCTTCCTC
 271 TTTCCAATTAGCCTGTGGGATGGGACTTGAAGCTGTGTCTGTTC
 316 TGCTCCACTGGCAACCTTTTCTTCAATGACTTAAGCTGGTGTTC
 361 GCCATTTTCCATACTCTATCATGGGGAGTGTTCAGTATCGGCATC
 406 TAGAGATCTCCCCTGGCCCCATCACAGCTAGAGCTATGCTGTCCC

 451 CTTTCAGGGACATCTTGTAATTTATCCACCCAGCCCCCAACTGAT
 Me

 496 GGACATAAAGGCTGTCTCCCCATCATCTCCTGCTACTACAGACAG
 tAspIleLysAlaValSerProSerSerProAlaThrThrAspSe

 541 CACTGCAGGGACTGTCTGTGTGTTTTTTAAGGCATGGGTACT
 rThrAlaGlyThrValLeuLeuCysPhePheLysAlaTrpValLe

 586 CCAGAAGCAGTTGCTCAGCTGCACCCCCAAGGTTGAGTGGAAGTC
 uGlnLysGlnLeuLeuSerCysThrProLysValGluTrpLysSe

 631 CCTCGGTAAAGGAGGAGGAGAGAGTGTGAAGGGAATGGCAAGGCG
 rLeuGlyLysGlyGlyGlyGluSerValLysGlyMetAlaArgAr

 676 GGGAGGGAGACAGGGCACAGGTGTCCTGGCAACAGCAGATGGGAA
 gGlyGlyArgGlnGlyThrGlyValLeuAlaThrAlaAspGlyLy

 721 ACAGGTCTGGCTAAGGTACCAGAAGCCAACAAGTCCCAGAAAGGT
 sGlnValTrpLeuArgTyrGlnLysProThrSerProArgLysVa

 766 CAAGTGACTTTCCCAAGGTCACACAGCAAGTTGATGGCAGAGCTG
 lLys

 811 GGTACAGGACTCAGA

Fig. 12

TRANSLATED PROTEIN - NUCLEOTIDE 83 TO 889

1 CTAGAATTCAGCGGCCGCTGAATTCTAGTGCAGAGTGAGCAAGGG
 46 CCGCCTCATCCAGCTTCTCTCTGAGAGCCAGGGCCACATGGCTCA
 MetAlaHi
 91 CCTGGTGAAC TCCGTCAGCGACATCCTGGATGCCCTGCAGAGGGA
 sLeuValAsnSerValSerAspIleLeuAspAlaLeuGlnArgAs
 136 CCGGGGGCTGGGCCGGCCCCGCAACAAGGCCGACCTTCAGAGAGC
 pArgGlyLeuGlyArgProArgAsnLysAlaAspLeuGlnArgAl
 181 GCCTGCCCCGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCG
 aProAlaArgGlyThrArgProArgGlyCysAlaThrGlySerAr
 226 GCCCCGAGACTGTCTGGACGTCCTCCTAAGCGGACAGCAGGACGA
 gProArgAspCysLeuAspValLeuLeuSerGlyGlnGlnAspAs
 271 TGGCGTCTACTCTGTCTTTCCACCCACTACCCGGCCGGCTTCCA
 pGlyValTyrSerValPheProThrHisTyrProAlaGlyPheGl
 316 GGTGTACTGTGACATGCGCACGGACGGCGGCGGCTGGACGGTGTT
 nValTyrCysAspMetArgThrAspGlyGlyGlyTrpThrValPh
 361 TCAGCGCCGGGAGGACGGCTCCGTGAAC TTCTCCGGGGCTGGGA
 eGlnArgArgGluAspGlySerValAsnPhePheArgGlyTrpAs
 406 TCGGTACCGAGACGGCTTTGGCAGGCTCACC GGGGAGCACTGGCT
 pAlaTyrArgAspGlyPheGlyArgLeuThrGlyGluHisTrpLe
 451 AGGGCTCAAGAGGATCCACGCCCTGACCACACAGGCTGCCTACGA
 uGlyLeuLysArgIleHisAlaLeuThrThrGlnAlaAlaTyrGl
 496 GCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGC
 uLeuHisValAspLeuGluAspPheGluAsnGlyThrAlaTyrAl
 541 CCGCTACGGGAGCTTCGGCGTGGGCTTGTTCTCCGTGGACCCTGA
 aArgTyrGlySerPheGlyValGlyLeuPheSerValAspProGl
 586 GGAAGACGGGTACCCGCTCACC GTGGCTGACTATTCGGCACTGC
 uGluAspGlyTyrProLeuThrValAlaAspTyrSerGlyThrAl
 631 AGGCGACTCCCTCCTGAAGCACAGCGGCATGAGGTTACCAACAA
 aGlyAspSerLeuLeuLysHisSerGlyMetArgPheThrThrLy
 676 GGACCGTGACAGCGACCATT CAGAGAACA ACTGTGCCGCCTTCTA
 sAspArgAspSerAspHisSerGluAsnAsnCysAlaAlaPheTy

Fig. 13

721 CCGCGGTGCCTGGTGGTACCGCAACTGCCACACGTCCAACCTCAA
rArgGlyAlaTrpTrpTyrArgAsnCysHisThrSerAsnLeuAs
766 TGGGCAGTACCTGCGCGGTGCGCACGCCTCCTATGCCGACGGCGT
nGlyGlnTyrLeuArgGlyAlaHisAlaSerTyrAlaAspGlyVa
811 GGAGTGGTCCTCCTGGACCGGCTGGCAGTACTCACTCAAGTTCTC
lGluTrpSerSerTrpThrGlyTrpGlnTyrSerLeuLysPheSe
856 TGAGATGAAGATCCGGCCGGTCCGGGAGGACCGCTAGACCGGTGC
rGluMetLysIleArgProValArgGluAspArg
901 ACCTTGTCCTTGGCCCTGCTGGTCCCTGTCGCCCCATCCCCGACC
946 CCACCTCACTCTTTTCGTGAATGTTCTCCACCCACCTGTGCCTGGC
991 GGACCCACTCTCCAGTAGGGAGGGGCCGGGCCATCCCTGACACGA
1036 AGCTCCCTGGGCCGGTGAAGTCACACATCGCCTTCTCGCCGTCCC
1081 CACCCCCTCCATTTGGCAG

Fig. 13 (continued)

TRANSLATED PROTEIN - FRAME: 2 - NUCLEOTIDE 38 TO 844

1
 CCGCCTCATCCAGCTTCTCTCTGAGAGCCAGGGCCACATGGCTCA
 MetAlaHi
 46
 CCTGGTGAACCTCCGTCAGCGACATCCTGGATGCCCTGCAGAGGGA
 sLeuValAsnSerValSerAspIleLeuAspAlaLeuGlnArgAs
 91
 CCGGGGGCTGGGCGGCCCCGCAACAAGGCCGACCTTCAGAGAGC
 pArgGlyLeuGlyArgProArgAsnLysAlaAspLeuGlnArgAl
 136
 GCCTGCCCCGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCG
 aProAlaArgGlyThrArgProArgGlyCysAlaThrGlySerAr
 181
 GCCCCGAGACTGTCTGGACGTCCTCCTAAGCGGACAGCAGGACGA
 gProArgAspCysLeuAspValLeuLeuSerGlyGlnGlnAspAs
 226
 TGGCGTCTACTCTGTCTTTCCACCCACTACCCGGCCGGCTTCCA
 pGlyValTyrSerValPheProThrHisTyrProAlaGlyPheGl
 271
 GGTGTACTGTGACATGCGCACGGACGGCGGGCTGGACGGTGTT
 nValTyrCysAspMetArgThrAspGlyGlyGlyTrpThrValPh
 316
 TCAGCGCCGGGAGGACGGCTCCGTGAACTTCTTCGGGGCTGGGA
 eGlnArgArgGluAspGlySerValAsnPhePheArgGlyTrpAs
 361
 TGCGTACCGAGACGGCTTTGGCAGGCTCACCGGGGAGCACTGGCT
 pAlaTyrArgAspGlyPheGlyArgLeuThrGlyGluHisTrpLe
 406
 AGGGCTCAAGAGGATCCACGCCCTGACCACACAGGCTGCCTACGA
 uGlyLeuLysArgIleHisAlaLeuThrThrGlnAlaAlaTyrGl
 451
 GCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGC
 uLeuHisValAspLeuGluAspPheGluAsnGlyThrAlaTyrAl
 496
 CCGCTACGGGAGCTTCGGCGTGGGCTTGTTCCGCGTGGACCCTGA
 aArgTyrGlySerPheGlyValGlyLeuPheAlaValAspProGl
 541
 GGAAGACGGGCACCCGCTCACCGTGGCTGACTATTCCGGCACTGC
 uGluAspGlyHisProLeuThrValAlaAspTyrSerGlyThrAl
 586
 AGGCGACTCCCTCCTGAAGCACAGCGGCATGAGGTTACCCACCAA
 aGlyAspSerLeuLeuLysHisSerGlyMetArgPheThrThrLy
 631
 GGACCGTGACAGCGACCATTTCAGAGAACAACGTGCGCCGCTTCTA
 sAspArgAspSerAspHisSerGluAsnAsnCysAlaAlaPheTy

Fig. 14

676 CCGCGGTGCCTGGTGGTACCGCAACTGCCACACGTCCAACCTCAA
rArgGlyAlaTrpTrpTyrArgAsnCysHisThrSerAsnLeuAs
721 TGGGCAGTACCTGCGCGGTGCGCACGCCTCCTATGCCGACGGCGT
nGlyGlnTyrLeuArgGlyAlaHisAlaSerTyrAlaAspGlyVa
766 GGAGTGGTCCTCCTGGACCGGCTGGCAGTACTCACTCAAGTTCTC
lGluTrpSerSerTrpThrGlyTrpGlnTyrSerLeuLysPheSe
811 TGAGATGAAGATCCGGCCGGTCCGGGAGGACCGCTAGACCGGTGC
rGluMetLysIleArgProValArgGluAspArg
856 ACCTTGTCCTTGGCCCTGCTGGTCCCTGTCGCCCCATCCCCGACC
901 CCACCTCACTCTTTCGTGAATGTTCTCCACCCACCTGTGCCTGGC
946 GGACCCACTCTCCAGTAGGGAGGGGCCGGGCCATCCCTGACACGA
991 AGCTCCCTGGGCCGGTGAAGTCACACATCGCCTTCTCGCCGTCCC
1036 CACCCCTCCATTGGCAG

Fig. 14 (continued)

27/42



Fig. 15

28/42



Fig. 16



Fig. 17

FRAME: 1 - NUCLEOTIDE 1 TO 498

1
ATGAATTTTCTGAAATTAATTGCTGTGTTTATAGTTTTAGCCAT
MetAsnPheLeuLysLeuIleAlaValPheIleValPheSerHis
46
GCATCGGAATCACCTCAGGACTCCACTCCCAATCAATTATATATC
AlaSerGluSerProGlnAspSerThrProAsnGlnLeuTyrIle
91
TGGGGGAGGACCAAGGCGTTGGTATTTTTCAGAAGCTCCACTGGT
TrpGlyArgThrLysAlaLeuValPhePheArgSerSerThrGly
136
GATTCTGACAGCACAGCTAGGATTAAGAACTGATCAATGGGAAC
AspSerAspSerThrAlaArgIleLysLysLeuIleAsnGlyAsn
181
AGCATGCCTGTTGCAGAGGAGCTTCCCTGGGAAATGTCACACACA
SerMetProValAlaGluGluLeuProTrpGluMetSerHisThr
226
GAACATCAATCTTCCTTCCCCACTCCTGAGATCCCTCATTCTTTG
GluHisGlnSerSerPheProThrProGluIleProHisSerLeu
271
GCACCAGGAACAGTTGCAATTAGTAAACCCTGGTTCCTGCTGTC
AlaProGlyThrValAlaIleSerLysProTrpPheProAlaVal
316
TCACAAATCGCAAGAGTCCAACGTGTGGATATAAACTTTTGTTC
SerGlnIleAlaArgValGlnArgValAspIleAsnPheCysSer
361
TGGGAGGATCTTTCTCCCAGTGGAAAAGCAACTGGGAAAAGCAGG
TrpGluAspLeuSerProSerGlyLysAlaThrGlyLysSerArg
406
ACACACTGCACAGTGACTGCAGTTTCATCCAATGCCACCACCCAT
ThrHisCysThrValThrAlaValSerSerAsnAlaThrThrHis
451
GCAGGCATAAATAATGAACATGGATGGGGGAGTCTGGAGCTGCTG
AlaGlyIleAsnAsnGluHisGlyTrpGlySerLeuGluLeuLeu
496
AAT
Asn

Fig. 18

CAGAGAGCGCCTGCCCCGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCCGGCCCCGAGACTGTCTGGACGTCCT
CCTAAGCGGACAGCAGGACGATGGCGTCTACTCTGTCTTTCCACCCACTACCCGGCCGGCTTCAGGTGTACTGTG
ACATGCGCACGGACGGCGGGCTGGACGGTGTTCAGCGCCGGGAGGACGGCTCCGTGAACCTTCTCCGGGGCTGG
GACGCGTACCGAGACGGCTTTGGCAGGCTCACCGGGGAGCACTGGCTAGGGCTCAAGAGGATCCACGCCCTGACCAC
ACAGGCTGCCTACGAGCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGCCCGCTACGGGAGCTTCG
GCGTGGGCTTGTTCCCGTGGACCCTGAGGAAGACGGGTACCCGCTCACCGTGGCTGACTATTCCGGCACTGCAGGC
GACTCCCTCCTGAAGCACAGCGGCATGAGGTTTACCACCAAGGACCGTGACAGCGACCATTGAGAGAACAACGTGC
CGCCTTCTACCGCGGTGCCTGGTGGTACCGCAACTGCCACACGTCCAACCTCAATGGGCAGTACCTGCGCGGTGCGC
ACGCCCTCCTATGCCGACGGCGTGGAGTGGTCCCTCGGACCGGCTGGCAGTACTCACTCAAGTTCTCTGAGATGAAG
ATCCGGCCGGTCCGG GAGGACCGC

Fig. 19

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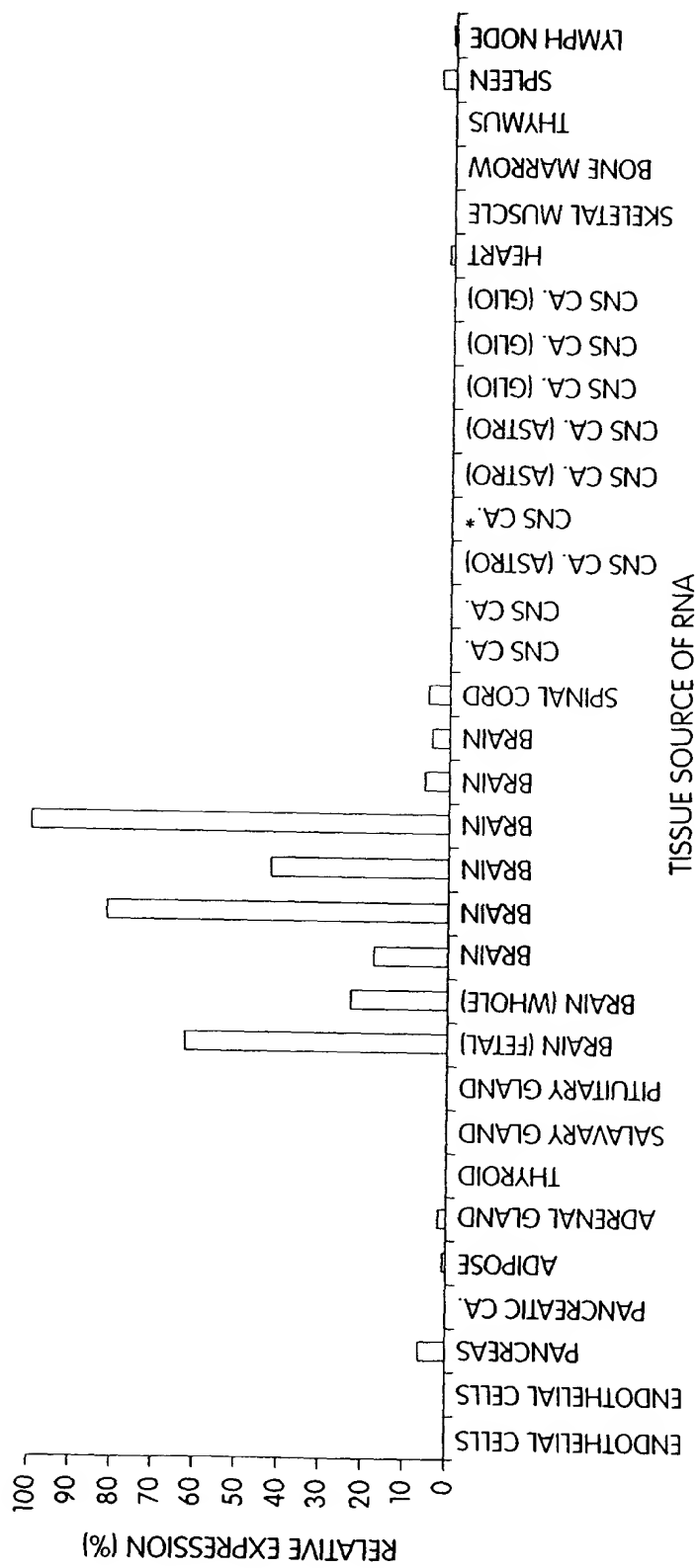


Fig. 20 (PANEL A)

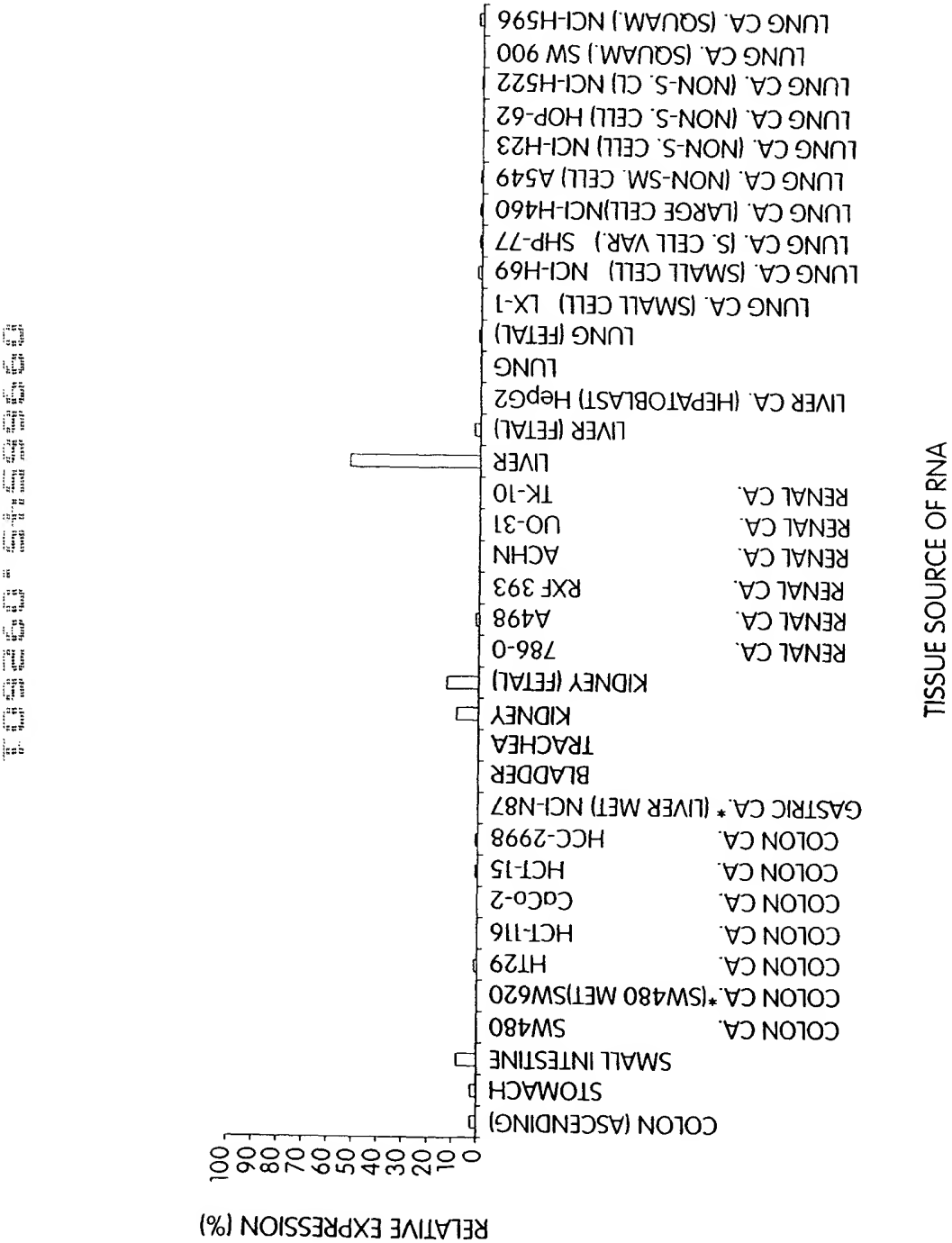


Fig. 20 (PANEL B)

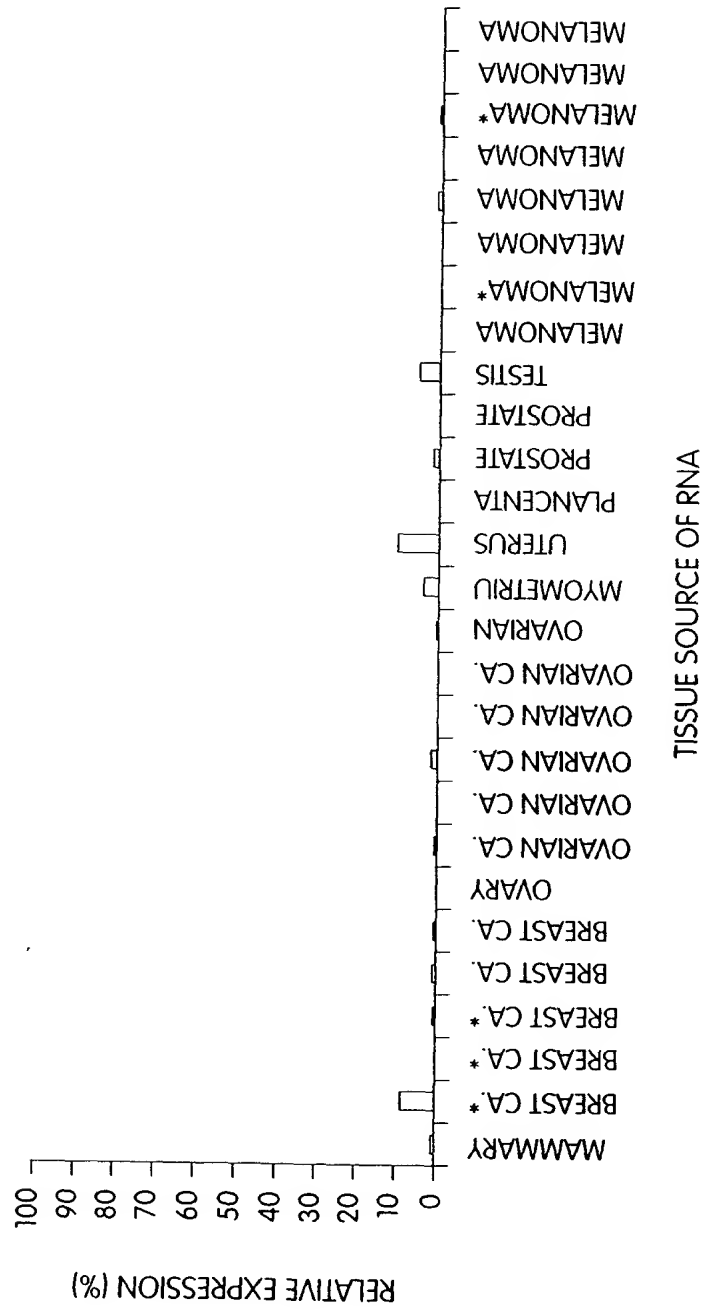


Fig. 20 (PANEL C)

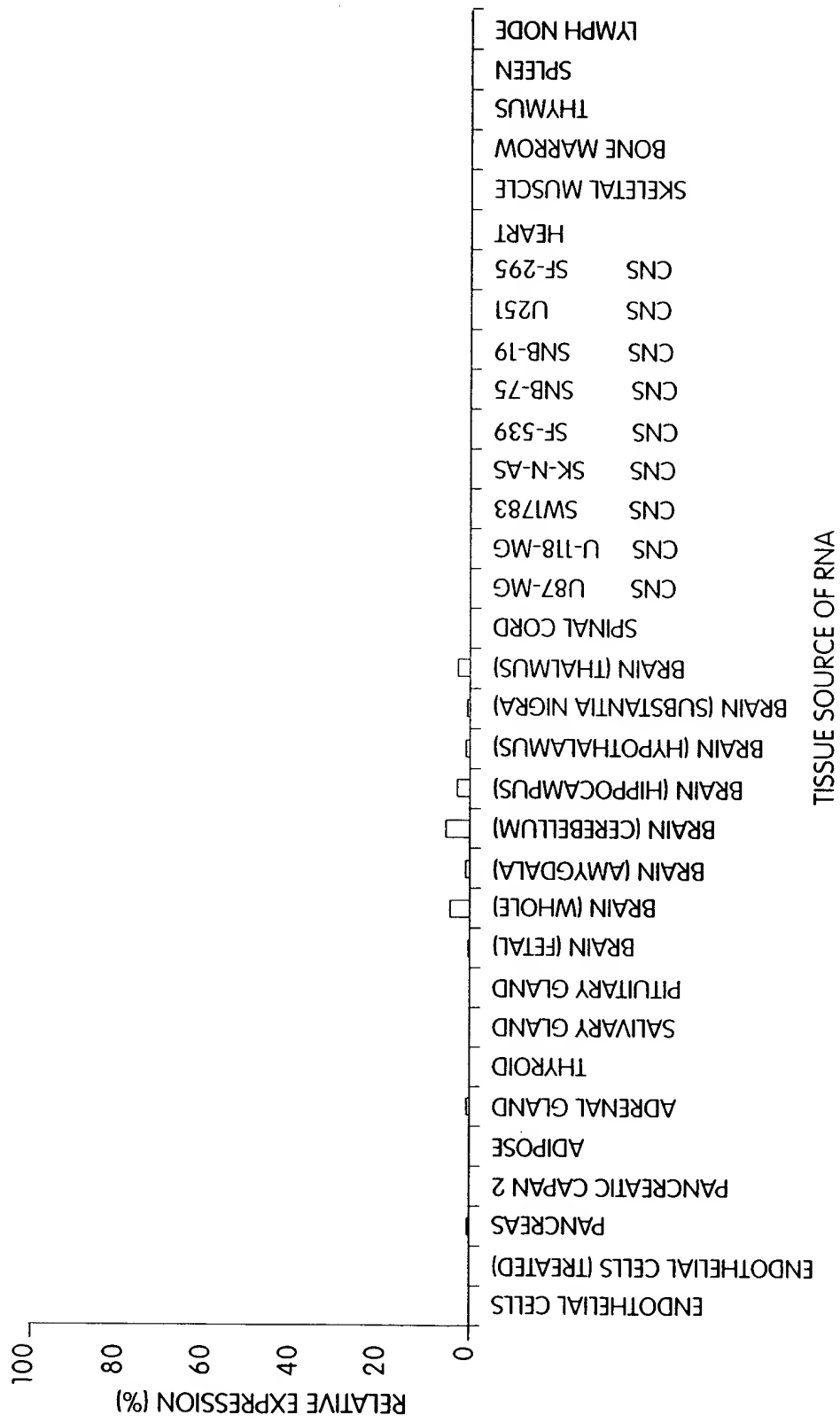


Fig. 21 (PANEL A)

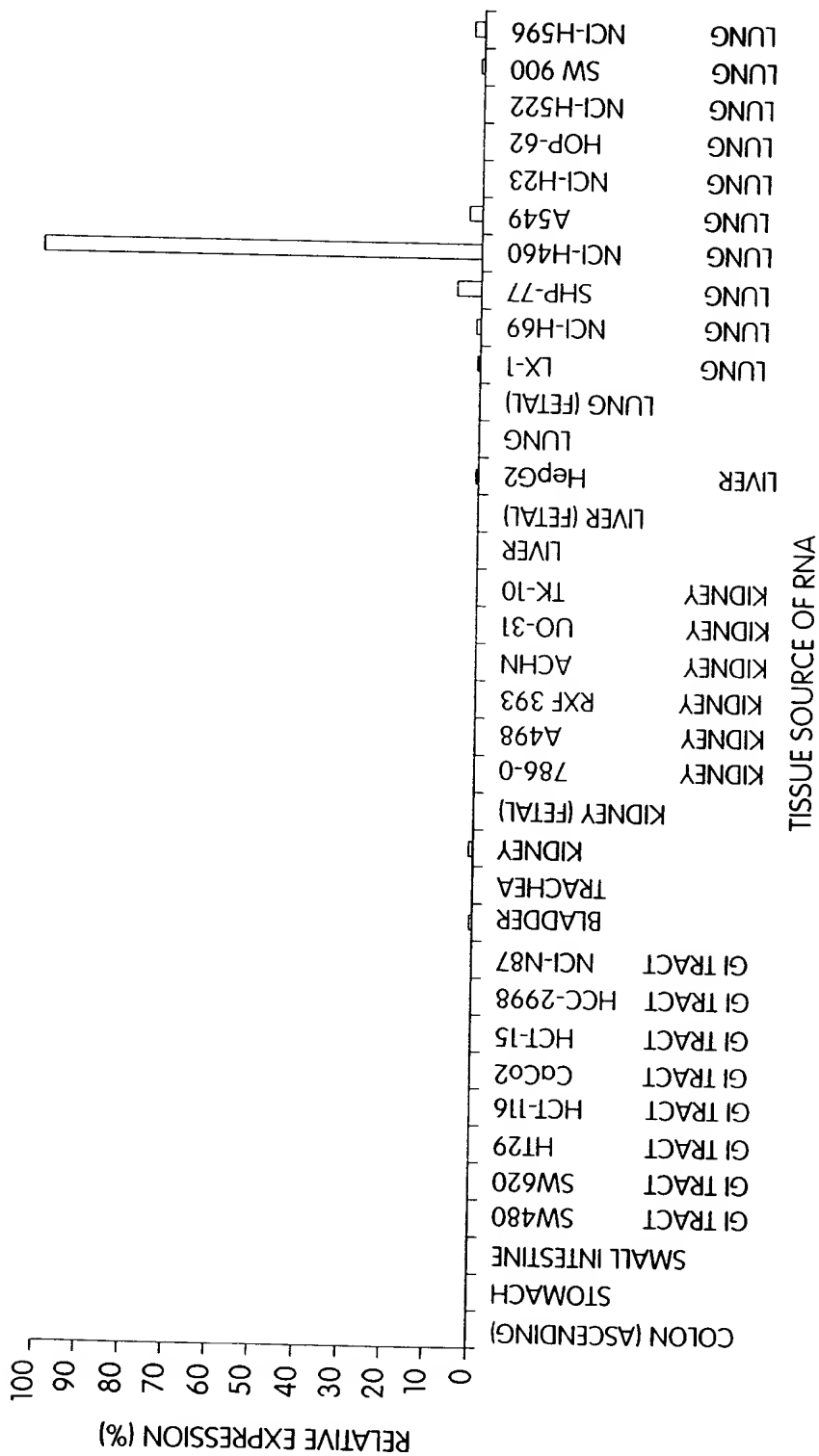


Fig. 21 (PANEL B)

NCI-H596
SW 900
NCI-H522
HOP-62
NCI-H23
A549
NCI-H460
SHP-77
NCI-H69
LX-1
LUNG (FETAL)
LUNG
HepG2
LIVER (FETAL)
LIVER
TK-10
UO-31
ACHN
RXF 393
A498
786-0
KIDNEY (FETAL)
KIDNEY
TRACHEA
BLADDER
NCI-N87
HCC-2998
HCT-15
CaCo2
HCT-116
HT29
SW620
SW480
SMALL INTESTINE
STOMACH
COLON (ASCENDING)

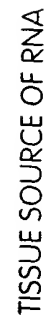


Fig. 21 (PANEL C)

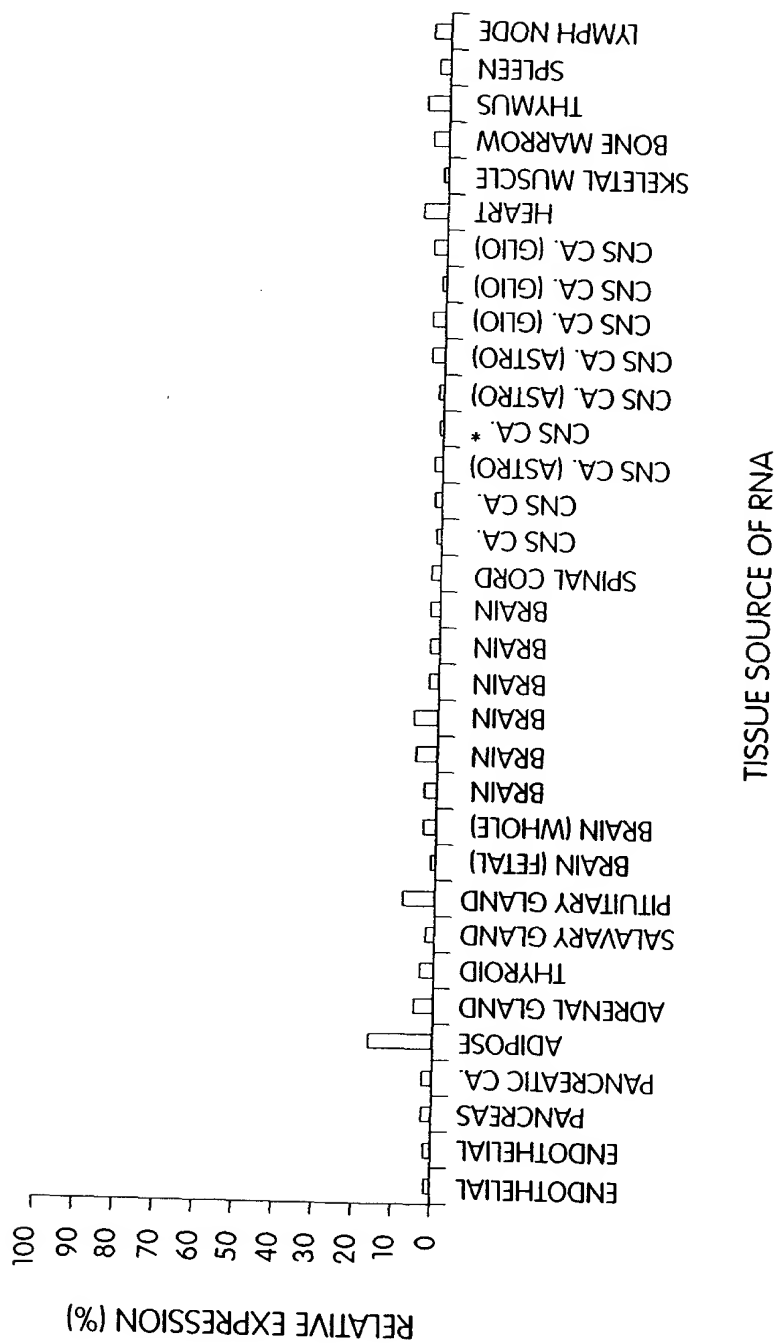
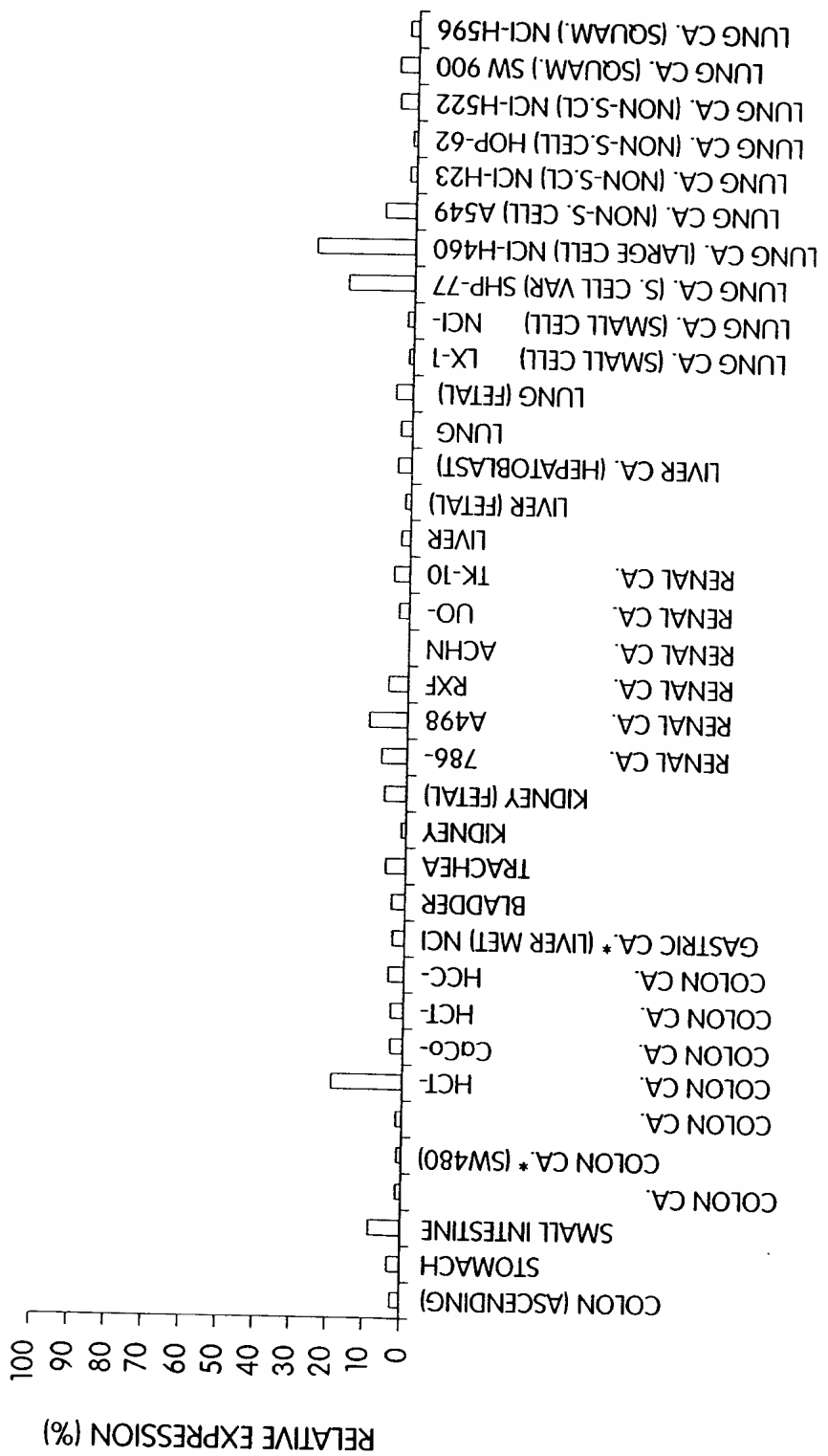
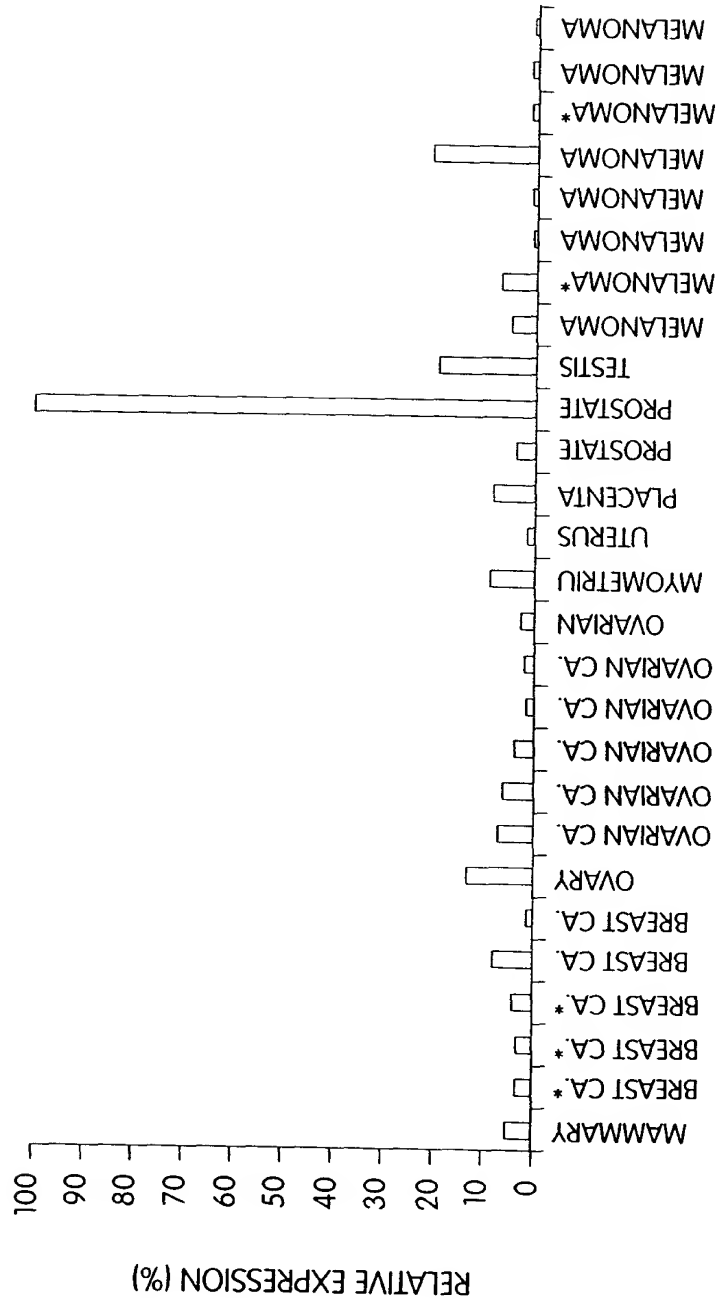


Fig. 22 (PANEL A)



TISSUE SOURCE OF RNA

Fig. 22 (PANEL B)



TISSUE SOURCE OF RNA

Fig. 22 (PANEL C)

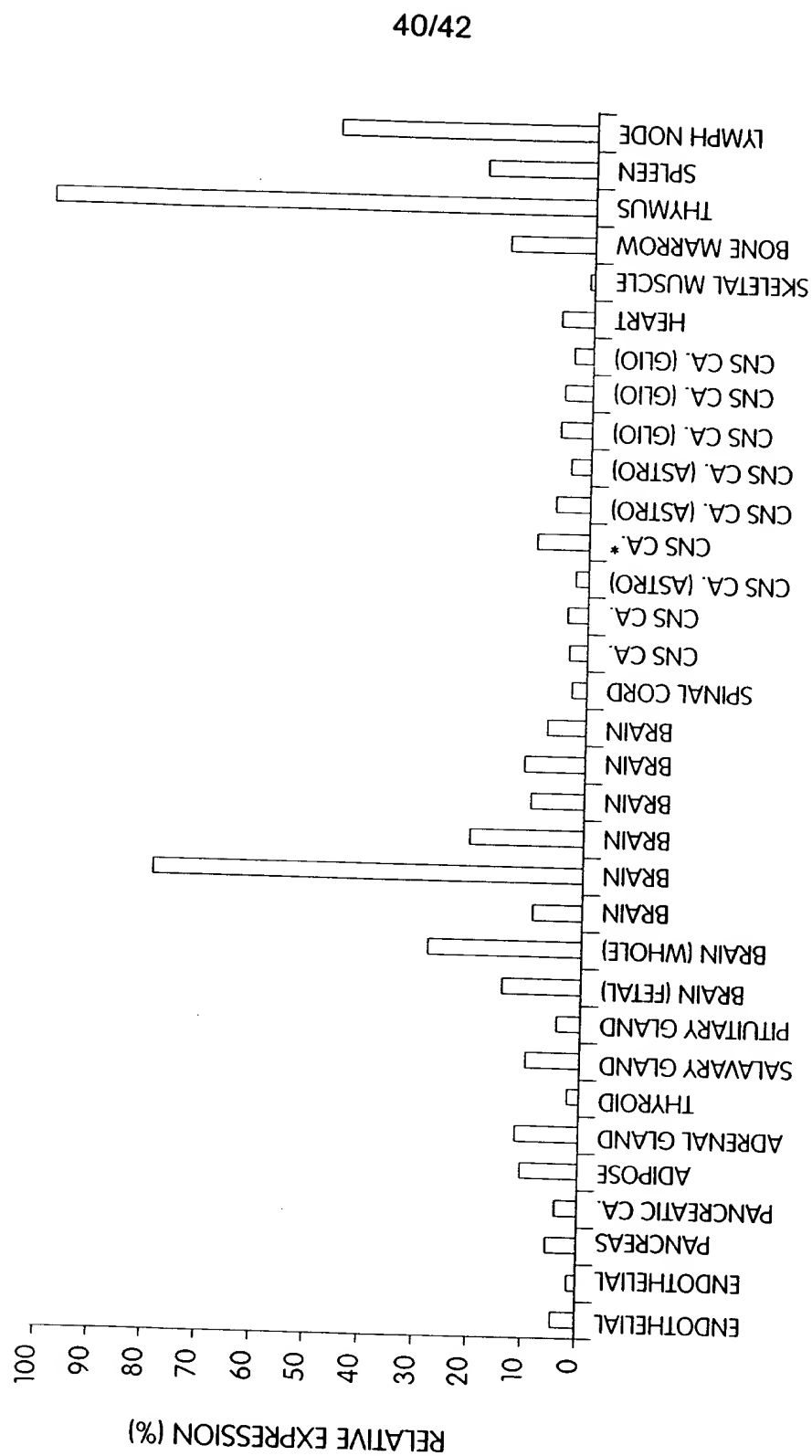


Fig. 23 (PANEL A)

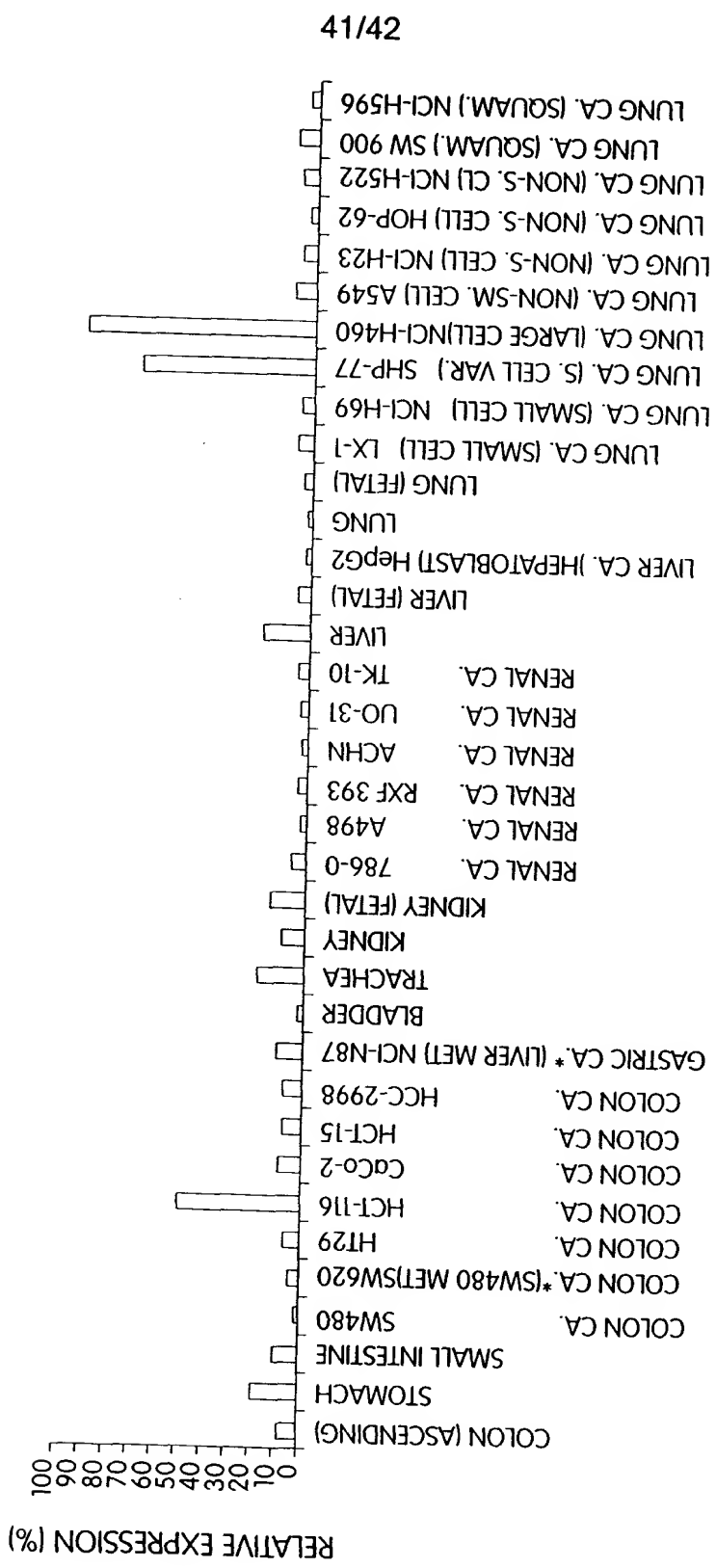
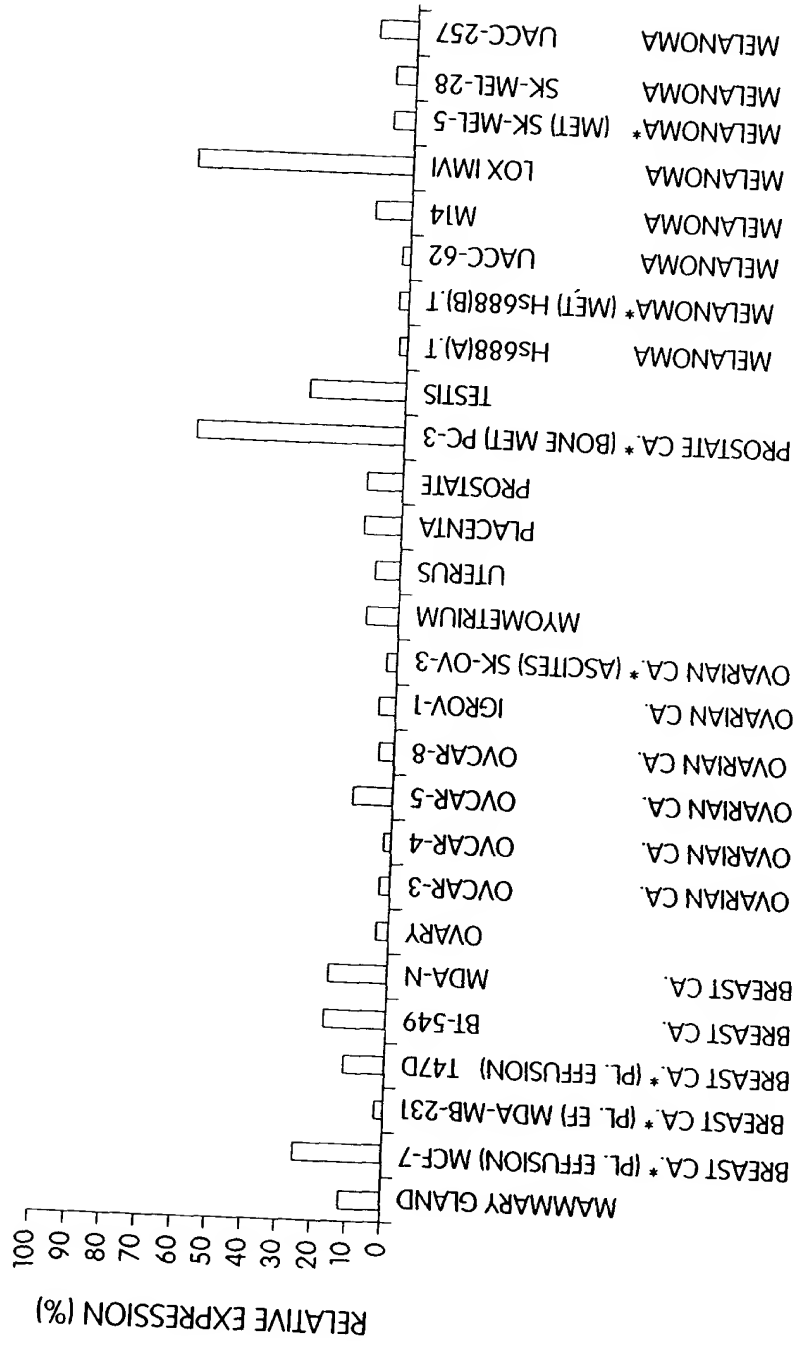


Fig. 23 (PANEL B)



TISSUE SOURCE OF RNA
Fig. 23 (PANEL C)

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